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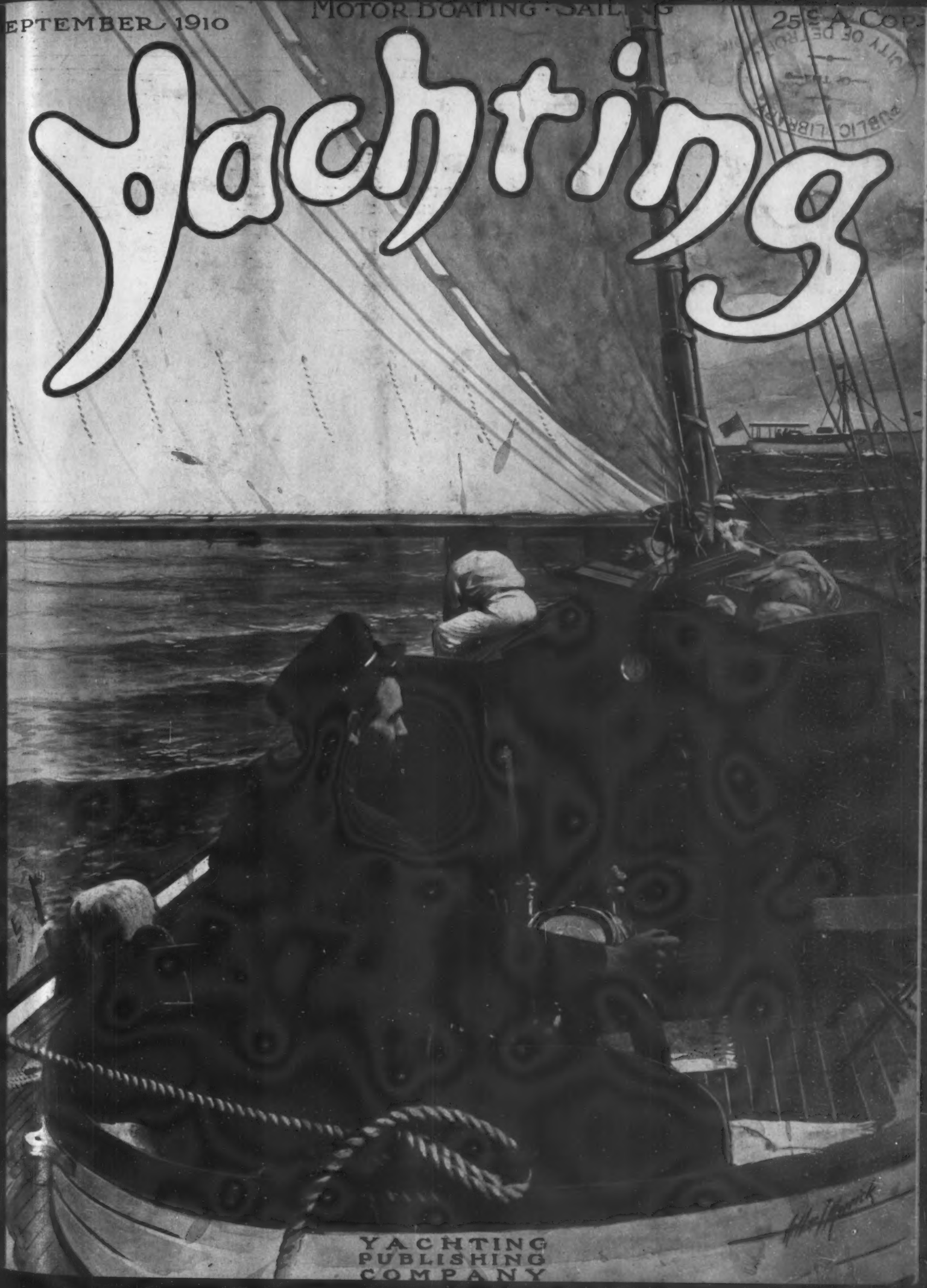

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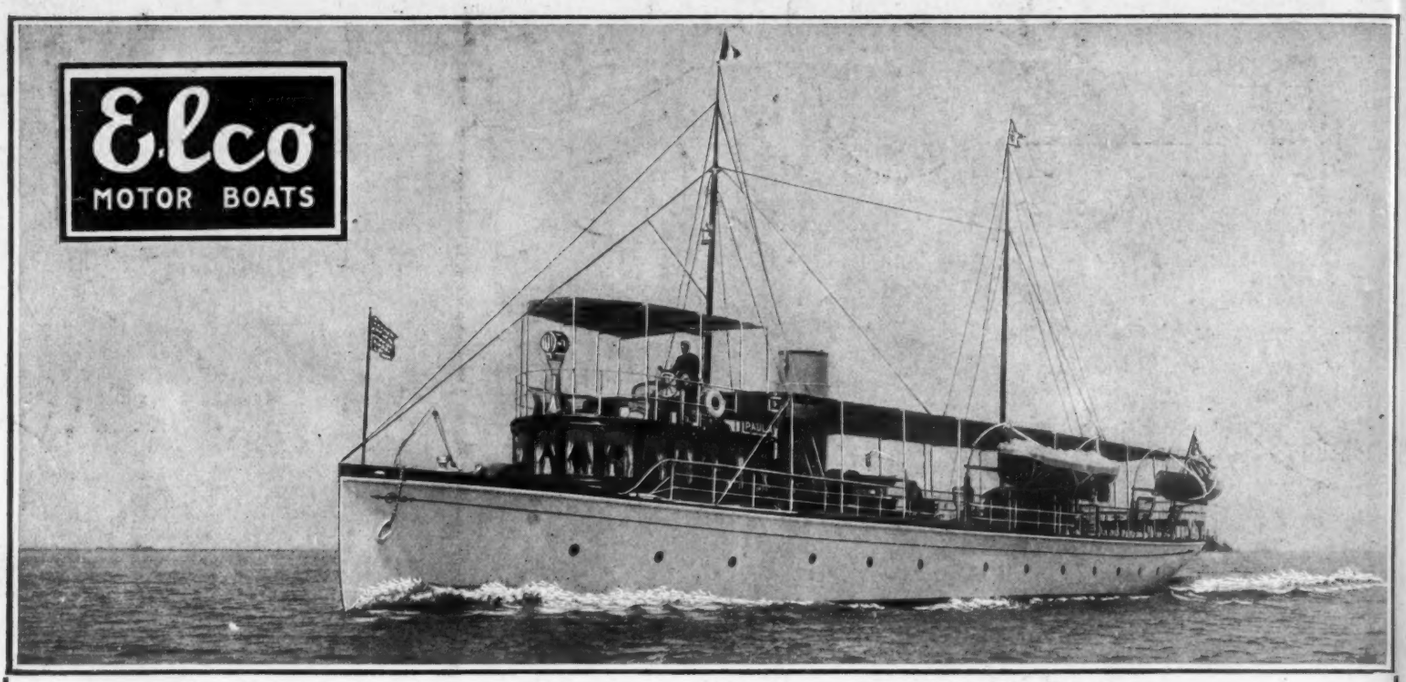

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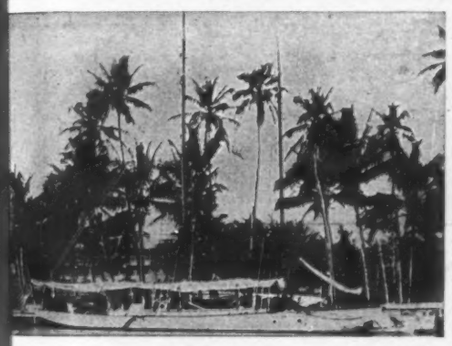
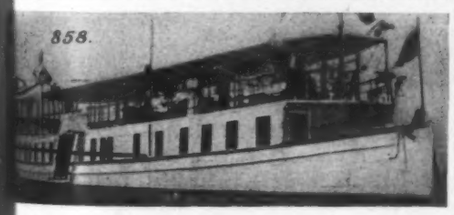
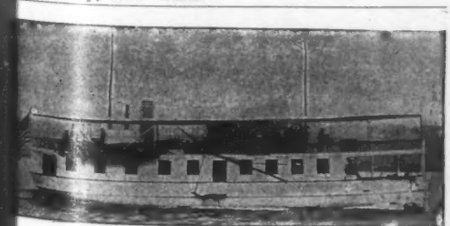
NO. 2409—FOR SALE OR CHARTER.—Desirable auxiliary schooner yacht. Has been to Florida each year since launched 1905. Trunk cabin and cockpit; built of wood; 90 x 65 x 21 x 4.6 ft. draught, centerboard. One double, three single staterooms, large main cabin, bath room and three toilets. Engine 28 H. P. Launch and two boats. Now in commission. Gielow & Orr, 52 Broadway, New York.



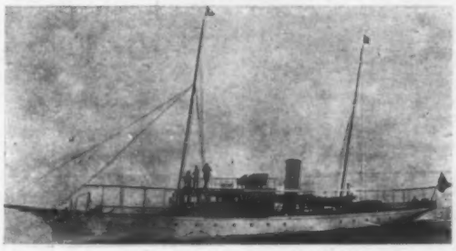
NO. 806.—Built especially for Southern cruising. Steel, auxiliary, centerboard schooner, 84 x 65 x 19.4 x 4.5 ft. draught. Lead ballast with flush deck ft. One double, two single staterooms, large main cabin with four berths, bath room, three toilets, forecastle, engine room, launch, cutter, and dinghy. 40 H. P. engine. Fine sea boat, handles well. Located New York. Gielow & Orr, 52 Broadway, New York.



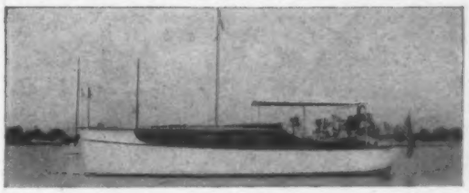
NO. 858—FOR SALE OR CHARTER.—Designed for use in Florida waters. Twin screw power houseboat, 125 x 18 x 3 ft. 6 ins. draught. Two 75 H. P. Standard engines. Five double staterooms, two bath rooms, large main cabin and upper deck. Electric lights. Extensive inventory. Sell for low figure for charter including crew's wages. Located New York. For plan, inventory and prices apply to Gielow & Orr, 52 Broadway, New York.



NO. 1894—FOR SALE OR CHARTER—Is now in commission. Twin screw gasoline houseboat, 85x23.6x4.6 ft. draught. Designed by Gielow; built 1906. Two 70 H. P. engines; speed 10½ to 11 knots. Three double staterooms, dining room, social hall, three bath rooms three toilets; acetylene lights. Has proved an unusually popular and well-liked craft. Price low. Plans, etc., from Gielow & Orr, 52 Broadway, New York.

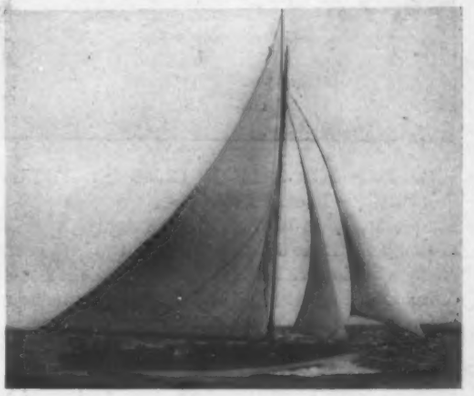


NO. 12—FOR SALE.—Herreshoff flush deck steam yacht, 127 ft. over all, 14 ft. beam, 6 ft. draught. Dining room on deck forward, three double staterooms, bath room, two owner's toilets. Can sleep from eight to twelve. Head room, 6 ft. 3 ins. Interior finish, white and mahogany. Triple expansion engine, water tube boiler, electric lights, moderate coal consumption, economical to operate. Launch, gig and dinghy, and extensive equipment. Offer desired. Gielow & Orr, 52 Broadway, New York.

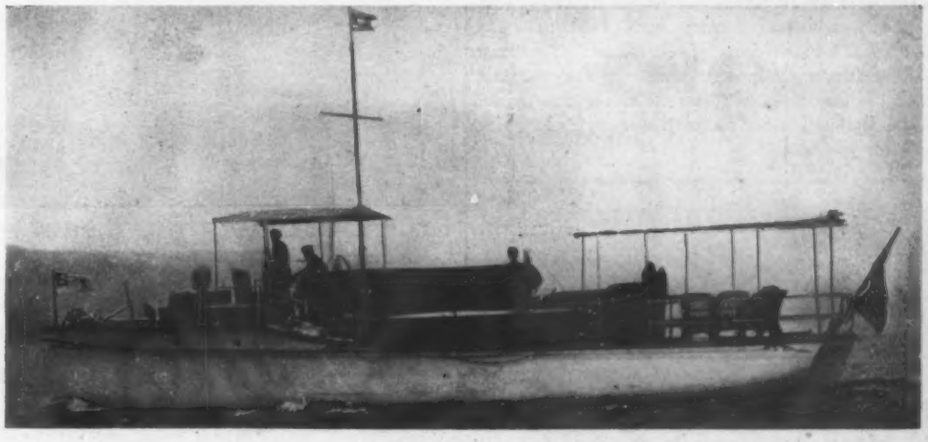


NO. 2754—FOR SALE.—In commission at attractive price. 35 ft. over all raised deck cruiser, 9 ft. beam, 2 ft. 8 ins. draught. Built 1908 and much better than the average. Thoroughly well kept up throughout. Head room, 6 ft. 2 ins. Interior finish, oak and cypress, mahogany trim. Double stateroom, two berths in cabin. Toilet room, galley. 2-cylinder, 4-cycle 12 H. P. engine. Strongly constructed, fine sea-boat. Cockpit 9 ft. long with engine under forward end. This thoroughly desirable outfit will be a good bargain for someone. In commission near New York. Gielow & Orr. 52 Broadway, New York.

NO. 29—FOR SALE OR CHARTER.—Built for use in Florida and at present located there. Twin screw, power houseboat, 91 x 23.5 x 3.6 ft. draught. Two double and two single staterooms, dining room and main cabin, bath room and three toilets. Launch, two dinghies and two skiffs. Two 30 H. P. engines, speed 6 miles. Acetylene lights. Will deliver in commission. Gielow & Orr, 52 Broadway, New York.



NO. 2013—FOR SALE.—One of the well-known and popular Buzzard's Bay 30-footers, 46 ft. 6 ins. over all, 10 ft. 10 ins beam, 5 ft. 4 ins. draught. Keel and centerboard. Double planked, copper fastened, lead ballast. Head room, 6 ft. Four berths in cabin and two in forecastle. Two suits of sails. Sands' outlet new 1910, and new 14-ft. gasoline launch. Fully found for cruising and in excellent condition, having been thoroughly overhauled this year. Located Massachusetts, in commission. Gielow & Orr, 52 Broadway, New York.



NO. 2776—FOR SALE.—The famous cruising motor yacht "Ilys." Built May, 1909. Length over all, 50 ft. 3 ins.; waterline, 48 ft. 7 ins.; beam, 10 ft. 6 ins.; draught, 3 ft. 4 ins. 25 H. P. Hall engine; equipped with electric light and acetylene; completely found ready for cruising, searchlight, etc. "Ilys" raced to Bermuda last year and to Havana this summer. Out of fourteen races entered has won thirteen cups. Owner's only reason for selling is that he wishes to build larger boat. Equipped with Nicholson log. Winner National Long Distance Championship, 1909, also winner of race from Bermuda to New York, 1909. Now in commission. For further particulars, price, etc., apply to Gielow & Orr, 52 Broadway, New York.

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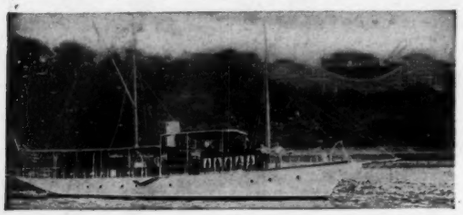
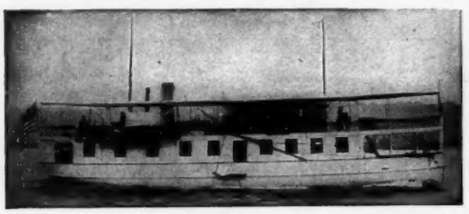
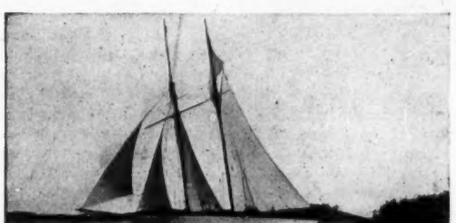


NO. 7729.—Practically new power boat for sale, 90 ft over all. Twin screw. Two large staterooms, saloon below, dining room on deck. Large bridge deck and after deck. Just completed a long cruise. Now in commission. Can be seen in New York.

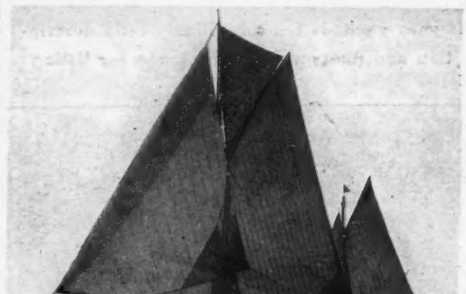


NO. 1832—FOR SALE OR CHARTER AT LOW PRICE—In commission, 85-ft. twin screw power house-boat. Two 70 H. P. gasoline engines, speed 10 to 12 miles. Three double staterooms, two bath rooms, dining room in deck house and social hall. All modern conveniences, acetylene lights, launch and two boats. Roomy accommodations. Tams, Lemoine & Crane.

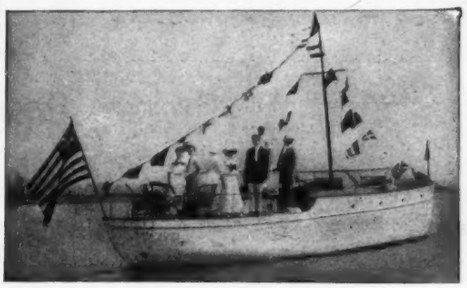


NO. 6014—FOR SALE AND CHARTER.—Auxiliary schooner, Lawley built 1903. 93 x 63 x 19.6 x 9 ft. Flush deck. Lead ballast. Two large double staterooms, saloon and bath. 25 H. P. Standard motor. Unusual sea boat, fast sailer. Won last year's race to Bermuda. For full particulars apply to Tams, Lemoine & Crane.

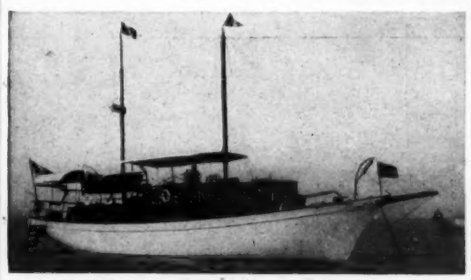
NO. 7499—FOR SALE OR CHARTER.—Brand new 40-ft. cruiser, 9 ft. 6 ins. beam, finished throughout in mahogany. 24–30 H. P., electric lights, sleeps five. Has pilot house, cabin, toilet, galley, large cockpit. Best possible condition. Unusual opportunity.



NO. 5552—FOR SALE OR CHARTER—Handsome and able auxiliary yawl, keel and centerboard; 74 ft. over all, new Standard engine, 1910. Two staterooms and main cabin sleeping five. Ratsey sails, launch, dinghy, acetylene lights. Completely furnished and a very comfortable cruiser.

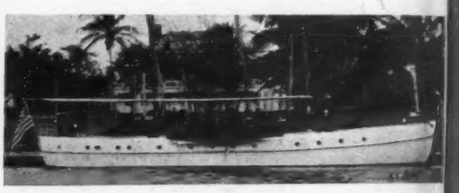


NO. 7132—FOR SALE OR CHARTER.—Unusual opportunity. 50 x 10 x 2.6 ft. raised deck cruiser; built by Lawley, 1907. Accommodations for six comfortably. 24 H. P. Lamb engine. Now in commission.

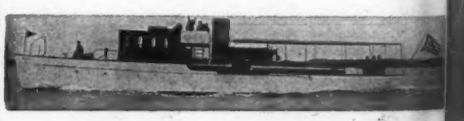


NO. 7462—FOR SALE—This unusually heavily constructed, able, modern motor yacht, 70 x 56 x 12.9 x 4.6 ft. Built 1907. Practically in commission. Owner going to Europe, will sacrifice for immediate sale. Has a 6-cylinder, 60 H. P. Lamb motor, condition guaranteed. Cruising radius of 500 miles. Complete electric light plant. Pilot house forward, has two transom berths. Saloon 10 ft. long has two transom berths. Ample locker space, etc. Stateroom has two berths with bath adjoining. Roomy forecastle. Finished in paneled mahogany. Unusual amount of deck space. Most notable feature is absolute lack of vibration.

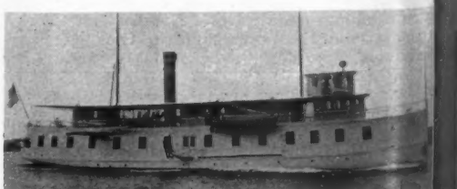
NO. 232—FOR SALE — Owner building large yacht, express twin screw steam yacht, 120 ft. ov all, 20 to 24 miles. Excellent condition throughou Dining saloon and toilet room in deck house. Cre and galley below forward. Double stateroom, bath room and cabin aft. Large bridge and after-deck Located at New York, Tams, Lemoine & Crane.



NO. 7349—AVAILABLE FOR SALE OR CHAR TER.—Twin screw power house-boat. Auxiliar sail plan. Has centerboard. 75 x 19.4 x 3 ft. draught Two 25 H. P. motors. Two large double, two singl staterooms, large saloon, bath room, unusual dec space. Complete equipment. Has made seven cruises to Florida.



NO. 7442—FOR CHARTER AND FOR SALE.— Cruising motor yacht, Lawley design and build 81 x 73 x 13 x 4 ft. draught; launched 1907; speed, miles; two double, two single staterooms; two berth in saloon; sleeps nine; equipped with 100 H. P. Stand ard, self-starting. Price attractive.



NO. 1816—FOR CHARTER OR FOR SALE.— Can be purchased at a low figure. Steam house boat, 130 x 30.6 x 7 ft. draught. Speed, 10½ miles Has smoking room, large dining room and mus room, three bath rooms, owner's stateroom very larg Several other rooms. Everything in best of condition In commission.

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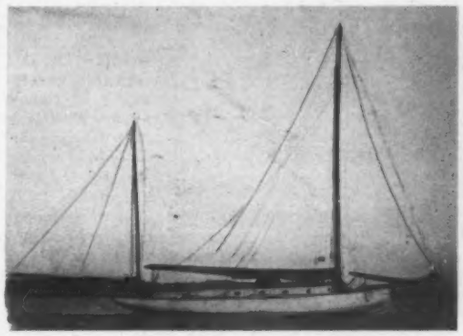
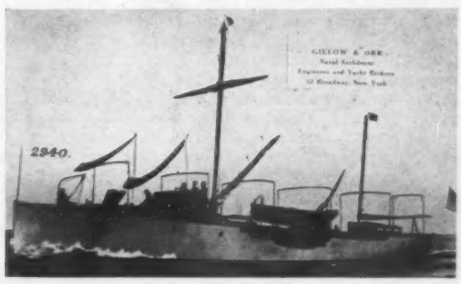
NO. 1964—FOR SALE—Sloop yacht, 36.1 x 24.10 x 7.6; draught 5 ft. 10 ins.; keel. Designers, Tams, Lemoine & Crane; builder, B. Frank Wood, City Island, 1906; built in very best manner with 5,500 lbs. lead outside; copper fastened; double planked, mahogany and cedar; canvas deck. Boat is in very best of condition, having been maintained in best possible manner; hollow spars, two suits of sails (one being Ratsey very slightly used), balloon jib, spinnaker and storm jib, winter cover, sail cover and small boat. Cabin contains transom on one side with space on other side for pipe berth, also clothes locker. Boat has a forward hatch. Spars and other equipment in fine condition. She is a new rule Q Class boat; can also sail in Handicap Class. Splendid sea boat, high freeboard. Seen near New York. Bargain. Gielow & Orr, 52 Broadway, New York.

NO. 2057—FOR SALE.—Dory ketch, 42 ft. over all, 31 ft. water line, 11 ft. beam, 5 ft. 6 ins. draught. Designed and built by Huntington, 1904. Copper fastened. Small cabin trunk giving large deck room and cockpit. Head room, 6 ft. 4 ins. Interior finish mahogany. Double stateroom, with two berths, and two transom berths in main cabin. Toilet room, excellent galley and forecastle. Two suits of sails, dinghy and complete cruising equipment. Easily handled and an ideal cruiser for off-shore and heavy weather. Located near New York Gielow & Orr, 52 Broadway, New York.

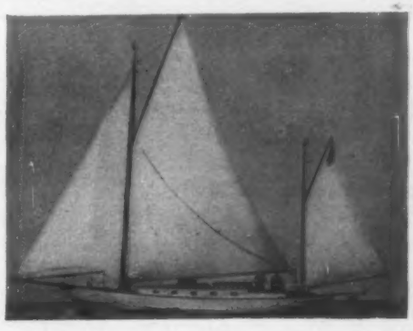
NO. 1624—FOR SALE—Auxiliary keel sloop yacht "Vayu," 40 x 33 x 12 x 6.6 ft. Accommodations for four to six. 18 h. p. Standard motor located under cockpit; speed 8 knots. Everything thoroughly overhauled last Spring. Equipment complete. Bargain before laying up. Located near New York. For full particulars and permit apply to Gielow & Orr, 52 Broadway, New York City.



NO. 557—FOR SALE.—Auxiliary yawl, 41 ft. over all, 28 ft. water line, 12 ft. beam, 4 ft. 7 ins. draught. Head room 6 ft. Toilet and good accommodations for cruising. Jaeger engine and full complement of sails, both new 1908. Extra well built, modern yacht. Very stiff, able and fast under sail Speed, under power, 6 miles per hour. Cost $4,600; will sell for about half price. In commission on Narragansett Bay. Gielow & Orr, 52 Broadway, New York.



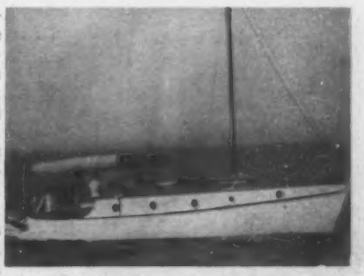
NO. 2940—FOR SALE.—Sea-going, twin-screw power yacht, ketch rig, 75 ft. over all, 13 ft. 4 ins. beam, 5 ft. 9 ins. draught. Two 125-H P. Jaeger engines. Speed, 11½ knots. Flush deck. Three double staterooms, main cabin finished in African mahogany. Bath room, two owner's toilets. Galley and crew forward. Launch 15 ft. and sailing dinghy. Large gasoline and water tanks. Electric lights. Complete inventory including small piano. Designed to make ocean voyages and to be as seaworthy as a well found sailing vessel. Can be maneuvered under sail. Unusually strong construction, with four watertight bulkheads. Located Massachusetts. Gielow & Orr, 52 Broadway, New York.



NO. 2248.—Unusual opportunity to charter attractive auxiliary centerboard yawl for cruise southward during fall or winter. 47.6 x 31.10 x 12.6 x 5 ft. draught. Built 1906. Cockpit about 8 ft. long. Stateroom with double berth, main cabin with two berths and two transoms, toilet room, and forecastle with two berths for crew. Ratsey sails new 1910. 4 cylinder, 4-cycle gasoline engine, 12 H. P., speed 7 miles. Round bottom cedar tender. Very best furnishings throughout, mostly new this season. Absolutely complete cruising equipment for six. Extra good sea boat. Will sell. Seen in commission near New York. Gielow & Orr, 52 Broadway, New York.

NO. 1365.—For sale at bargain before laying up. Fast and able twin screw hunting cabin launch, 62 ft. over all, 12 ft. beam, 4.6 ft. draught. Designed and built by well-known firms. Speed, 12 to 14 miles A-1 construction; copper fastened. An able launch suitable for cruising or day service; cockpit 14 ft. long, steering from forward end of same with engine control; two crew's berths in forecastle, followed by engine room, with two 30 H. P. Craigs; next aft large galley and toilet room; followed by main cabin sleeping three. Mahogany finish. Acetylene lights, tender on davits, etc. Maintained best possible condition. In commission near New York. Want offer. Gielow & Orr 52 Broadway, New York.

NO. 349.—For charter or sell at low price before putting out of commission, 130-ft. steam yacht. Flush deck, built of wood, 1890. Speed, 12 to 14 knots. Forward deck house contains social hall and large owner's stateroom with two brass beds, toilet room, etc. Dining saloon and steward's pantry in after deck house. Main saloon forward, with one double, three single staterooms, bath and toilet room. Large bridge on forward deck house. Roomy after deck. Officers' and crew's quarters, galley, below aft. Triple expansion engine, water tube boiler, steam heat, steam windlass, electric lights, searchlight, three boats including launch, awnings, interior equipment. Can be bought right. Gielow & Orr, 52 Broadway, New York.



NO. 2758—For sale at really attractive figure Raised deck cruiser. 35.4 x 8 x 3.6 ft. draught. Built 1909. 3-cylinder, 25 H. P. Ferro engine. Stateroom and cabin each with two berths, galley, toilet room. Mast with jib and loose-footed mainsail, cedar dinghy. Large gasoline capacity. Acetylene lights. Excellent equipment. Owner states that there is not a better sea boat nor more roomy one of her size. Strongly built, copper fastened, salt water fittings. A genuine bargain. Sell for less than half cost before laying up. Located at Rochester, N. Y. Further particulars from Gielow & Orr, 52 Broadway, New York.

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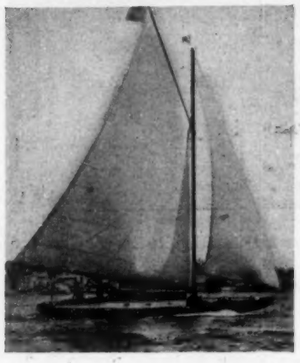
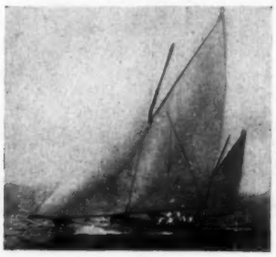
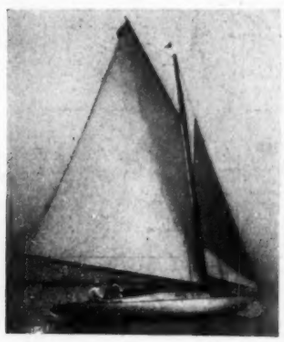


NO. 945—FOR SALE.—Exceedingly attractive cruising and racing knockabout. 37 ft. over all, 22 ft. water line, 10 ft. beam, 6 ft. draught. Designed by Burgess and built by Fenton, 1903. Copper fastened. Lead ballast. Interior white and mahogany. Transoms sleeping four. Toilet. Complete sails. New launch 1910. Excellent inventory. No expense spared to keep in A-1 condition. Has cruised extensively to the eastward in all kinds of weather and has always been satisfactory. Located in Rhode Island and can be seen still in commission. Gielow & Orr, 52 Broadway, New York.

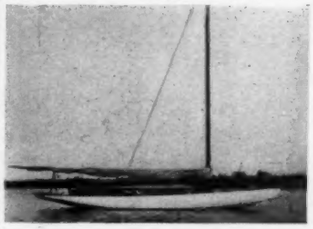


NO. 559.—For sale at extremely low figure. Herreshoff keel yawl, 47 ft. over all, 32-ft. waterline, 8 ft. 10 ins. beam, 7 ft. draught. Lead ballast, copper fastened, double planking. Headroom, 5 ft. 10 ins. Four transoms in cabin and two berths in forecastle. Toilet. In commission and in good condition. Sails new 1908. Cheapest proposition on the market. Located near New York. Gielow & Orr, 52 Broadway, New York.

FOR SALE.—28 x 6 ft., raised deck cruiser. New 1910 model. 7½ H. P. Mianus motor giving a speed of 8½ to 9 miles an hour. Just completed a 500-mile cruise to Lake Champlain. Complete inventory. Everything new this season. Can be seen any time. Owner going to leave city soon. Best cash offer takes her. Apply M. Nicholas, 37 East 42d Street, New York City.

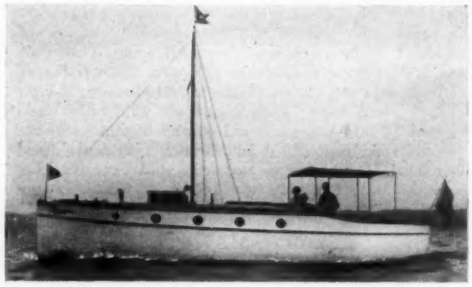


FOR SALE.—Cruising centerboard sloop and dinghy, 21 x 9.6 x 3.6 and 32.6 ft. over all. Centerboard houses in keel. White pine decks, mahogany trim, copper water tanks. Hand design sleeping transoms 13.6, full berth room for four, fine sails, storm trysail, awning, good outfit. Ostermoor cushions. Boat is sound, fast and able and one of the largest small cruisers on Long Island Sound. Can be seen New Rochelle. Apply V. C. Brown, 34 West 33d Street, or M. W. Daboll, 95 Broad Street, New York City.



NO. 3033—FOR SALE.—Attractive, fast and able, centerboard sloop. 43.6 x 26 x 12 x 2.10 ft. draught. Designed by Burgess & Packard, built 1900. Copper fastened, double planking, outside lead ballast. Head room, under carlines 5 ft. 6 ins., under skylight 6 ft. 2 ins. Four double berths in cabin, pipe berth in forecastle, good toilet room and galley. Interior finish, mahogany and cypress. Complete suit of sails; 10 H. P. 3-cylinder engine. Cockpit, companionway, skylight, coamings, and deck trimmings are all mahogany. In fine condition throughout. Located at Buzzard's Bay, Mass., in commission. Price very reasonable before laying up. Gielow & Orr, 52 Broadway, New York.

NO. 1846—FOR SALE OR CHARTER.—Now located in Florida; built especially light draught for service in those waters. Twin screw auxiliary ketch, 88 x 78 x 22 x 3 ft. 6 ins. draught. Three double staterooms, main cabin, dining saloon, interior finish mahogany and quartered oak; three toilets, engine room, forecastle, gun locker, acetylene lights, and many features making this yacht particularly suitable for the South. Two Standard engines, speed 10 miles. Launch and dinghy. Ratsey sails. Complete equipment. Price low. Gielow & Orr, 52 Broadway, New York.



THE gamest and roomiest boat of her size. 34' 5" o. a. 32' 2" w. l. 9 ft. beam, 6 ft. head room. Very fast. Launched June, 1909. Finest construction, built by day's labor. Stateroom, full-length clothes closet, buffet, cabin, engine room, toilet, etc. Ice box holds 100 pounds. Velvet carpet, velour cushions, hair mattresses. Mahogany and cypress finish. Complete outfit including china and silver for six. 10-ft. Lawley tender, binnacle, compass, searchlight. One trip in bad weather will convince any purchaser. Can be seen by appointment. Now moored on North River. Apply, Room 502, 1493 Broadway, N. Y., or Box 502, care of Yachting.

SATANITA—Most complete, modern, speedy, sixty-footer afloat. Winner RUDDER Trophy in Ontario 300-mile race. A rare opportunity. 60 ft. over all; 13 ft. beam; 3 ft. 9 in. draft; six-cylinder 50 h. p. Standard engine. Speedy, magnificent sea boat; luxuriously fitted up; sleeps eight aft, four forward; double stateroom. Designed by Whittelsey; built by Jacob in 1909. A perfect craft. Best of reasons for selling. Thomas B. Pritchard, Rochester, N. Y.

NO. 339—FOR SALE. — One of the most desirable auxiliary catboats afloat. 35 x 31.2 x 14.9 x 40 inches draught. Built by Crosby, Osterville, Mass. Oak and cedar, copper fastened. Large cabin, finished bright, headroom 6 ft. Large cockpit seating twelve. Unusually able and in perfect condition in every way. Lathrop engine, 14 H. P., new 1910. Thoroughly overhauled and re-equipped 1910 with a complete new cruising inventory including silver, china, glass, linen, towels, sheets, blankets, pillows, cooking utensils, dinghy, Negus brass binnacle and compass, bed, ship's clock. Must be seen to be appreciated. In commission at New London, Conn. Sale desired before laying up. Gielow & Orr, 52 Broadway, New York.

NO. 2899—FOR SALE.—Very successful and well-known Class Q racing sloop; 36 x 25.4 x 7.6 x 5.9 ft. Designed by Crane; built by Wood, City Island. Construction of the best. Double planking of Virginia cedar and mahogany, all copper riveted. Sails by Ratsey. Jib and mainsail new 1909. Balloon jib and spinnaker new 1908. Also extra jib and spinnaker new 1908. Rigging throughout new 1909. Hollow spars; mast new 1909. Has excellent racing record, having won championship of Gravesend Bay 1908 and 1909. Is especially adapted for racing in Handicap Class. Price exceptionally low. In A-1 condition. Apply to Gielow & Orr, 52 Broadway, New York.

STOLEN.—July 27, 1910, from owner's boathouse, Freeport, L. I. Modern glass cabin launch with plumb bow and canoe stern. 35 ft. over all, 7.6 ft. beam, 2.2 ft. draught, low freeboard. 13 windows, 6 each side, 1 in front; 3 forward windows curved. Aft of glass house roof extends over cockpit with side curtains. Thwartship sliding hatch each side at forward end of cockpit. Hull painted white; bottom copper sheathed, sheathing appearing above waterline forward of amidships. Brass rail aft not polished. Window sashes mahogany; top and bottom coaming oak, varnished; top strake varnished; two half-round mouldings varnished. Forward cabin 8 ft. long with lockered seats each side, brass steering gear at forward end. Cabin followed by pantry and water closet on port side; galley on starboard side. Aft of this comes cockpit 9 ft. long with lockered seats each side. 10 H. P. "Fulton" engine fitted with clutch, pilot house control. Second window from stern on port side shut off with mahogany board. Name "Caroline" on mahogany boards each side of bow (probably have been removed). Two hundred dollars ($200) reward paid for information resulting in recovery of boat and equipment. Anyone seeing boat answering this description please telegraph immediately collect. Pierre M. Brown, 71 Nassau Street, New York City.

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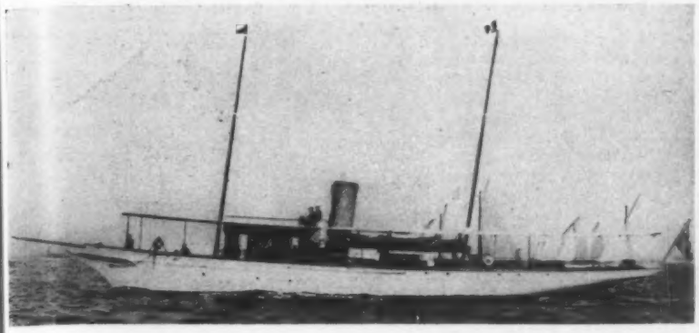
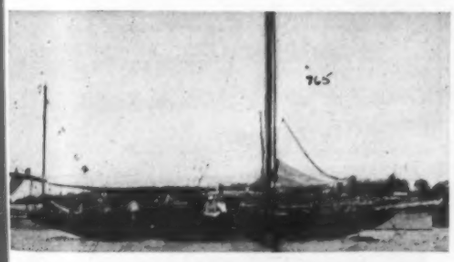


NO. 95 (a)—FOR SALE—Able and attractive steam yacht; staunchly constructed and in first-class condition. Length over all 109 ft., water line 86 ft., beam 15 ft. 4 ins., draught 7 ft. 6 ins. Compound engine and two Almy water tube boilers; speed 14 miles; electric lights; storage batteries, steam windlass, steam heat, large ice-box, Bramhall-Deane range, awnings, binnacle, dinghy, and gig. Yacht is flush deck, with deckhouse forward used as dining saloon with dumb-waiter connecting to galley below, also smoking section. Owner's accommodations aft, consisting of two staterooms with double berths, one stateroom with single berth, one toilet room, two patent transom berths in saloon very broad and comfortable, and also two berths in pilot house, Pullman style. Galley, officers' and crew's quarters forward. This yacht has cruised inside and outside from North Carolina to Bay of Fundy, and has had a large amount of money spent on her in placing and keeping her up-to-date in all departments. For plan and further details apply to Cox & Stevens, 15 William Street, New York City.

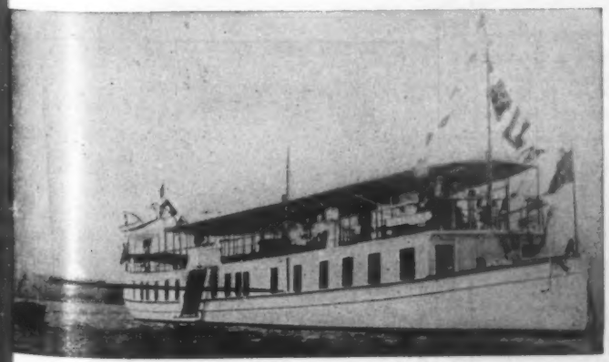
NO. 365—BARGAIN—High-grade twin-screw motor yacht; 61 ft. x 12 ft. x 4 ft. 6 in. draught; designed and built by well-known firm; launched 1904. A-1 construction; copper fastened; thoroughly able and roomy boat; top of cabin trunk used as promenade deck with metal railing of sufficient height entirely around; steers from pilot house and bridge; immediately aft of bridge is comfortable deck seat athwartships; the deck aft is flush; the interior finish of cabin is mahogany, with carpets and upholsteries to match; has roomy pilot house and saloon forward, followed by galley to starboard, and toilet room and lavatory to port; aft of this is the engine room, following this is a 14-ft. main saloon; a wide companionway leads from main saloon to after deck. Equipped with two 25 h. p. Standard engines; speed 12 miles. Completely found; two tenders on davits, etc. Splendid proposition for Florida or St. Lawrence river. Apply to Cox & Stevens, 15 William St., New York City.



NO. 765.—FOR SALE.—Fast, modern keel sloop yacht; 51 ft. 2 in. o. a., 33 ft. w. l., 12 ft. beam, 7 ft. 6 in. draft. Build 1903 at cost of $5,000 to $6,000; available at less than half cost, as owner is very anxious to sell. All lead ballast on keel. Finish of mahogany throughout; bright decks. Double stateroom, saloon, toilet and lavatory, etc. Light sails new 1909. Complete cruising equipment. In first-class condition. Apply to Cox & Stevens, 15 William Street, New York City.

NO. 914—FOR SALE.—High speed power boat; 50 ft. over all, 6 ft. 6 in. beam; 3 ft. draught. Speed 18½ to 20½ miles. Built 1908 by Seabury; equipped with a 70 h. p. 6-cylinder Speedway motor. Hull and joiner work of mahogany. Saloon contains two transoms, toilet and lavatory. Very desirable for fast ferry service or day cruising, and an excellent seaboat. Now in commission. Apply to Cox & Stevens, 15 William Street, New York City.

NO. 383—Offer wanted—55x12x3 ft. twin-screw gasoline cruiser. Very roomy; two double staterooms, 12-ft. saloon, 3 toilets, etc. Speed, 11 miles. Now in commission. Cox & Stevens, 15 William St., New York.



NO. 30—FOR SALE OR CHARTER. Comfortable twin-screw gasoline houseboat, 123 ft. 3 in. over all, 115 ft. water line, 17 ft. 8 in. beam, 3 ft. draught. Speed, 9 knots. Two Standard motors of 75 h. p. each. Very roomy accommodations, including five double staterooms, large main saloon, two bath rooms, three toilets, etc. Interior finish of mahogany and white. Hot water heating plant, new Standard electric light plant, and full cruising equipment, including pianola. Completely screened throughout. Everything in excellent condition. Launch and small boats on davits. Built in best manner. Particularly desirable for cruising in Southern waters. For plan, etc., apply to Cox & Stevens, 15 William Street, New York.

NO. 906—FOR SALE. Modern flush deck keel auxiliary schooner, 95 ft. over all, 68 ft. water line, 20 ft. 6 in. beam, and 10 ft. draft. Now in commission. Accommodations include three staterooms, large saloon, bath room, three toilets, etc. Equipped with 75 h. p. Globe motor, in perfect condition. Sails by Ratsey, new last year; also extra suit. Complete cruising outfit; four boats, including launch new 1909. A well-known craft; has been in four N. Y. Yacht Club cruises and won 11 prizes. In fine condition throughout. Price low. Apply to Cox & Stevens, 15 William St., New York.

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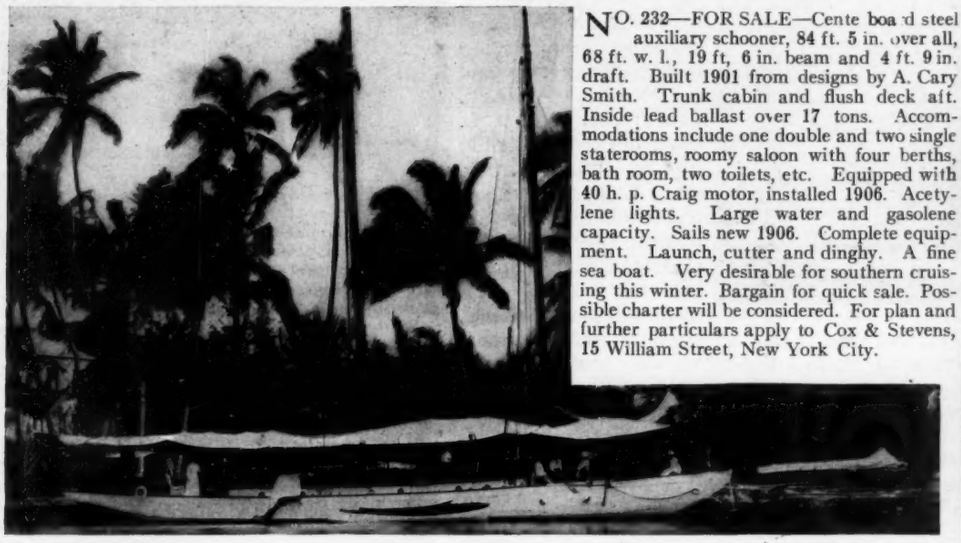
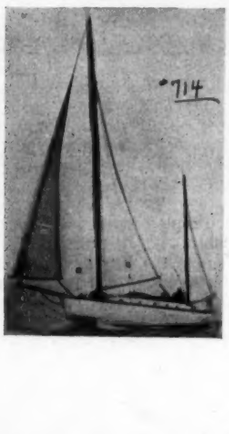


NO. 232—FOR SALE—Center board steel auxiliary schooner, 84 ft. 5 in. over all, 68 ft. w. l., 19 ft, 6 in. beam and 4 ft. 9 in. draft. Built 1901 from designs by A. Cary Smith. Trunk cabin and flush deck aft. Inside lead ballast over 17 tons. Accommodations include one double and two single staterooms, roomy saloon with four berths, bath room, two toilets, etc. Equipped with 40 h. p. Craig motor, installed 1906. Acetylene lights. Large water and gasolene capacity. Sails new 1906. Complete equipment. Launch, cutter and dinghy. A fine sea boat. Very desirable for southern cruising this winter. Bargain for quick sale. Possible charter will be considered. For plan and further particulars apply to Cox & Stevens, 15 William Street, New York City.

NO. 795.—FOR SALE.—Mahogany semi-speed cruising launch; 55 x 9 x 3 ft. Speed 13 to 15 miles; 45 to 70 h.p. 20th Century motor. Saloon accommodates four; handsomely finished and furnished. Price attractive. Cox & Stevens, 15 William Street, N. Y.

NO. 356.—BARGAIN—80 ft. high speed cruiser; 300 h. p. Standard. Speed 20 miles. Fully found. Cox & Stevens, 15 William Street, New York City.



NO. 714—Offer desired—Keel and C. B. Auxiliary yawl; 41 x 28 x 11.7 x 4.7 ft. Built 1903. Speed under power, 6 miles. Sails, etc., A-1. Cox & Stevens, 15 William Street, New York City.

NO. 716—SACRIFICE.—Very fast and attractive Herreshoff keel yawl 47 ft. over all, 32 ft. water line, 11 ft. beam, 7 ft. draught. Lead ballast on keel. Double cedar planking, all copper fastened. Two sets of sails, racing suit new 1909. Saloon contains two berths, toilet, etc. Head room, 5 ft. 10 ins. Berth forward for man. Excellent equipment. Champion of her class for four seasons. In first-class condition; now in commission. Cox & Stevens, 15 William Street, New York.

NO. 933—SACRIFICE—Keel cruising knockabout, 32 ft. over all, 20 ft. water line, 8 ft. 6 in. beam and 4 ft. 2 in. draft. Built by Robert Jacob in very best manner. Excellent head room and fast sailer. Now in commission. In fine condition throughout. Very complete. Offer wanted. Apply to Cox & Stevens, 15 William Street, New York.

NO. 569—BARGAIN. Hunting cabin cruiser, 35x9x3 ft. Built 1907 by New York Yacht, Launch & Engine Co., Morris Heights. Finished in mahogany. Accommodates four in saloon. 15 h. p. 20th Century motor. Speed, 9 to 10 miles. Apply to Cox & Stevens, 15 William St., New York.

NO. 504.—FOR SALE OR CHARTER—75 x 17 twin-screw raised deck cruiser. Excellent accommodations; two 40 h. p. 20th Century motors. Fully found. Apply to Cox & Stevens, 15 William Street, New York.

NO. 588.—FOR SALE.—Fast and able day cruising launch; 62 ft. x 12 ft. Finished in mahogany. Speed 12 to 14 miles; two new 30 h. p. Craig motors. Available at half cost. Cox & Stevens, 15 William Street, New York.

NO. 533—Sacrifice—38.6x8.6 ft. raised deck cruiser. Launched 1908. Speed, 10 to miles; 36 h. p. Buffalo motor. Cabin accommodates two comfortably. Now in commission. Very able craft. Apply to Cox & Stevens, William St., New York.

NO. 1000—FOR SALE—Steam yacht, 117 over all, 105 ft. water line, 17 ft. beam, 6 in. draught. Iron construction. Speed 11 m Compound engine; water tube boiler; acetyl lighting plant. Accommodations include s staterooms, main and dining saloons, bath ro etc. Over $20,000 was recently spent on yacht. Can be purchased at a bargain, as ow is anxious to sell. For plan, etc., apply to & Stevens, 15 William St., New York.

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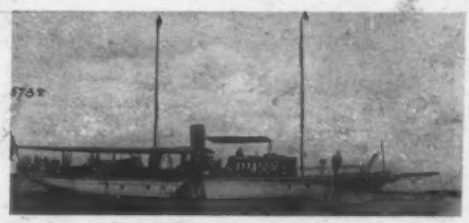
NO. 910—FOR SALE—Day cruiser, 53.5 x 10.3x3 ft. Best construction, by Lawley. Finished in teak. 25 H. P. Standard. Apply to Cox & Stevens, 15 William Street, New York City.

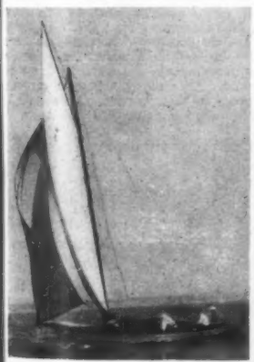
NO. 470—FOR SALE—Raised deck cruiser, 60x12x3.6 ft. New 40 H.P. motor; speed 11 miles. Two staterooms, roomy saloon, etc. Details from Cox & Stevens, 15 William St., New York City.

NO. 651—FOR SALE—Lawley raised deck cruiser, 50 x 10 x 2.9 ft.; 24 H. P. Very desirable for cruising in shoal waters. Apply to Cox & Stevens, 15 William Street, New York City.

NO. 175—BARGAIN—Power yacht, 86x12x4.4 ft. Speed, 12 to 14 miles; 75 H. P. Murray & Tregurtha engine. Located Florida. Excellent condition. Apply to Cox & Stevens, 15 William Street, New York City.



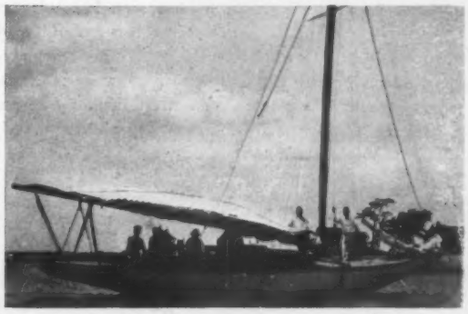
NO. 573—FOR SALE OR CHARTER—Twin screw motor yacht, 90.9x14.6x3 ft. Built 1909. Very roomy. Splendid craft for Florida cruising. Apply to Cox & Stevens, 15 William Street, New York City.



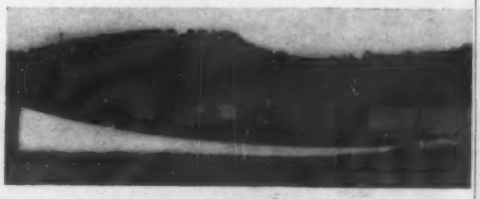
FOR SALE—Well-known sloop yacht "Crescent." 41 ft. 8 in. o. a., 30 ft. 1 in. w. l., 9 ft. 4 in. beam, 6 ft. 3 in. draught. Built 1906. Lead ballast on keel 4 tons. Double planking of cedar and mahogany. Copper riveted throughout. Cabin and cockpit of mahogany. Two full suits of sails by Ratsey and Wilson & Silsby. Winner of Class "P" championship, Gravesend Bay, and created record for distance in the Stratford Shoal Race last year. In exceptionally fine condition, and extensive interior alterations this Spring provide excellent cruising accommodations. Four berths in cabin, new hair mattresses, complete galley appointments, new rigging, sail covers, etc. Will sell at low figure to immediate purchaser as owner proposes building class boat for next season. Frank Bowne Jones, Yacht Agent, 29 Broadway, New York.

WANTED—For fishing purposes, an open or cabin power boat of 25-32 feet, which can be seen running. Need not be of any hard wood finish or fast, but must be strongly built and of good beam and have up-to-date motor. Good price paid for good boat. State where boat may be inspected and address offers, giving age, price and full description to Otto Gerdau, Wallack's Point, Stamford, Conn.

FOR SALE—Semi-Torpedo Motor Boat, length 30 ft. with 5 ft. beam; full equipment, auto steering and control, three cylinder 12 h. p. Cady Motor, speed 14 miles per hour: motor can be equipped with auxiliary valves making speed 16½ miles per hour. This boat will carry larger engine and we will sell with 30 h. p. motor if desired. Write for full details and attractive price, as this outfit must be sold at once. C. N. Cady Company, Canastota, N. Y.



KEEL SLOOP, 25-ft. water line; draft, 6 ft. Fast, able and well built. Very complete equipment, including 11-ft. cedar tender. Very attractive boat which will be sold exceptionally low if taken this season. Address C. W. Lord, West Haven, Conn.



FOR SALE—In commission, Cabin Launch, 33' x 7' 3", in good condition. 4-cylinder, 15-H. P. Buffalo Engine with jump spark and reverse clutch. Speed 9 miles. Toilet room with fresh water supply, refrigerator, and fully equipped. Joseph Merriam, Middletown, Conn.

ABLE C. B. Cruiser in fine condition, fair speed, 31' x 26' x 11' 9" x 3'. Nearly new sails with storm jib and spinnaker, (also old sails). Full size canvas winter cover. Awning and sail covers of Khaki, 3 anchors and good cables, some spare lines, running rigging one season. Strong wire standing rigging and back stays. Decks painted (narrow plank) outside planking hard pine. Canvas at cockpit and house. Wheel box, doors, slide, skylight and table leaves mahogany. Fine open cabin, 4ft. 6 in. high, sleeps six, broad transoms and storage space, shelves, etc. Lined ice and lamp boxes on rolls from cabin steps. New hair cushions. Ballast inside mainly iron (some stone.) No tender, dishes or compass. In commission until Nov. 15, 1910. Address W., care of Yachting, for prices and further particulars.

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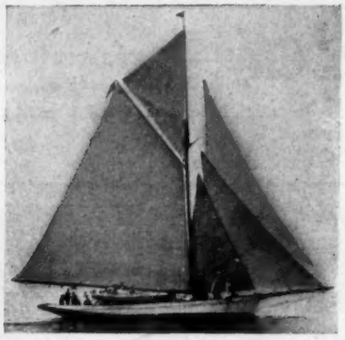
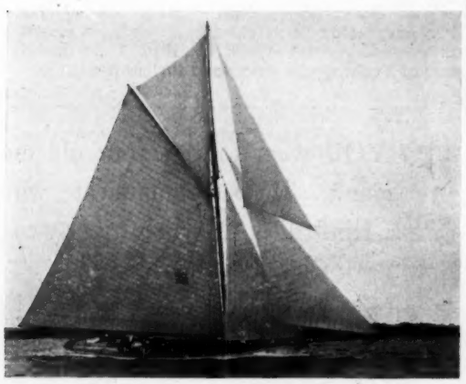
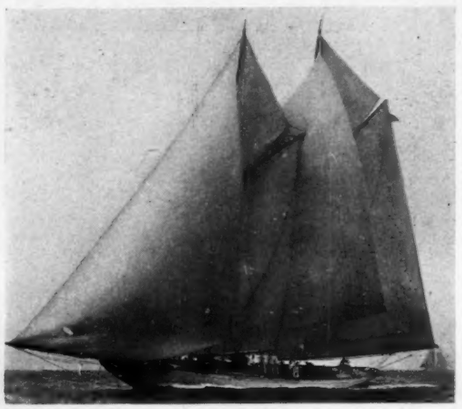


FOR SALE—No. 1931—C. B. Auxiliary Sloop, designed by Cary Smith. 63 o. a., 52 w. l., 17 beam, 7 draught. 12 tons lead on keel, 2 double staterooms, large saloon, toilet, galley, crew's quarters. Interior solid mahogany. 40 h. p. Rochester engine installed in 1907, speed 8 miles per hour. Fine suit Wilson & Silsby sails, 16-ft. launch, gig, etc.—everything in first class order. Price $3,000. Inspectable in commission, Rochester, N. Y. Address, Stanley M. Seaman, 220 Broadway, New York.

NO. 6193—FOR SALE—New raised deck cruiser, launched 1910, from Whitaker design. 39 ft. 6 ins. over all; 9 ft. 6 ins. beam; 3 ft. 6 ins. draught. One man control. Commodious cabin provides berths for four people. Mahogany interior, lighted by electricity; gives 6 ft. 2 ins. headroom. 16-20 h. p. "Standard"; speed 10 miles. Complete equipment. Reasonable offer considered—owner desires larger boat. Address Stanley M. Seaman, 220 Broadway, New York.



NO. 10,140—FOR SALE—Gardner 35 ft. keel sloop, 54 ft. o. a., 12 ft. beam, 8 ft. draught; composite construction. 8 tons lead keel, 2 staterooms, saloon with 2 transoms; solid mahogany interior; 6.3 ft. headroom. Complete inventory—2 suits sails, hollow spars. Boat thoroughly overhauled several years ago—hardly used since—in first class condition throughout. Excellent prize record—able and consistent cruiser. Eligible in either M or N class under new rules. Must sell—want offer; accept smaller boat or auto part pay. Address my agent, Stanley M. Seaman, 220 Broadway, New York.



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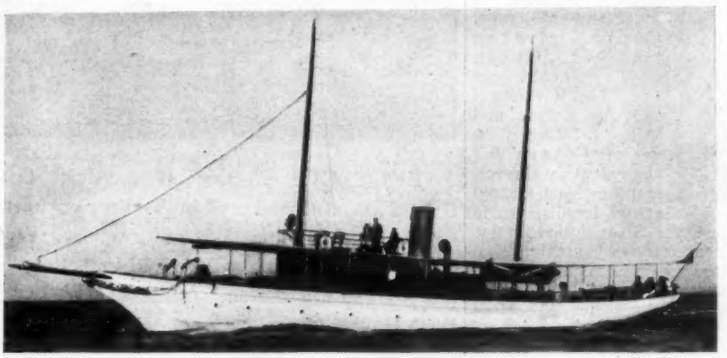

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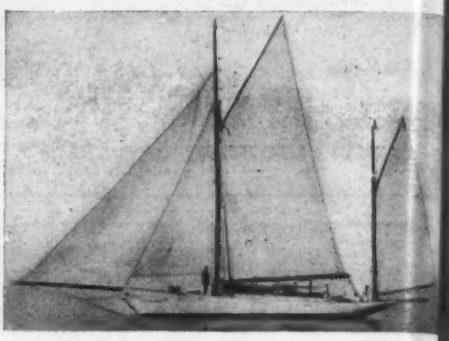

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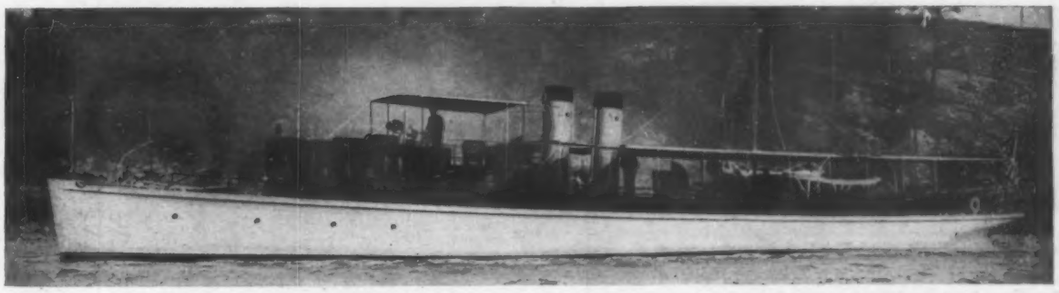

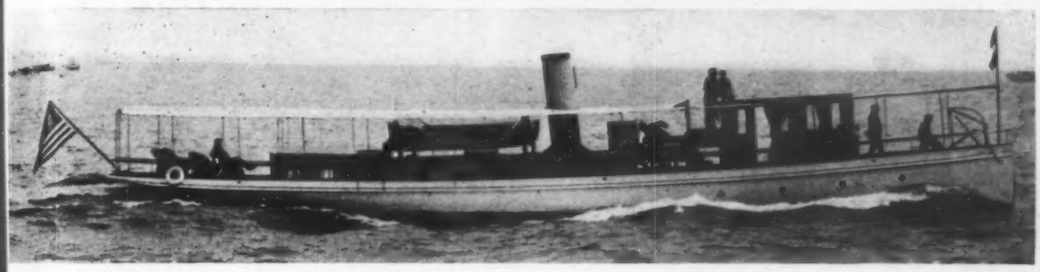

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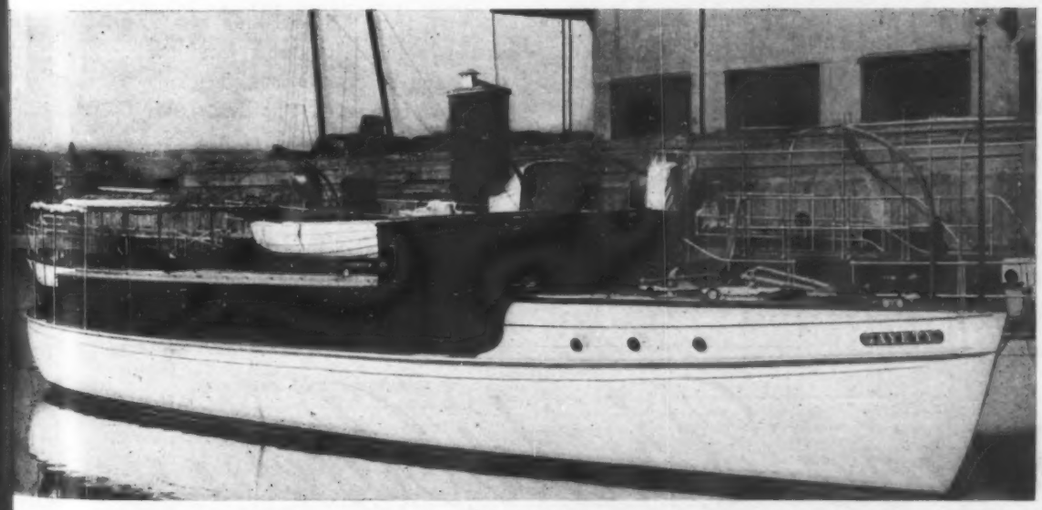

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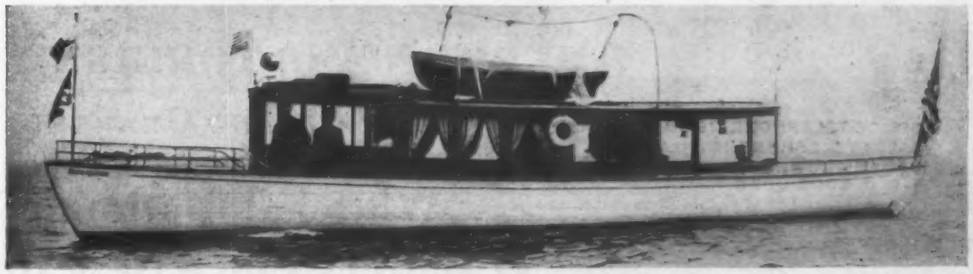

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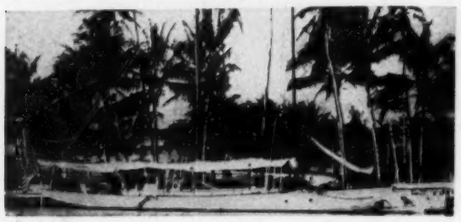

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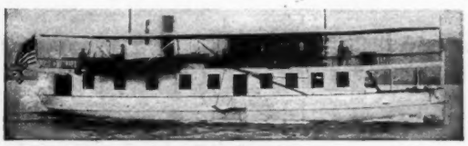

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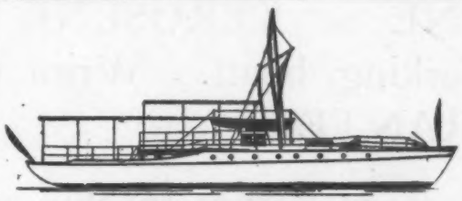

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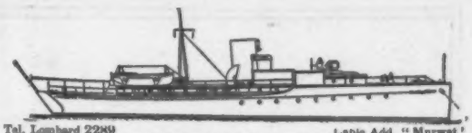

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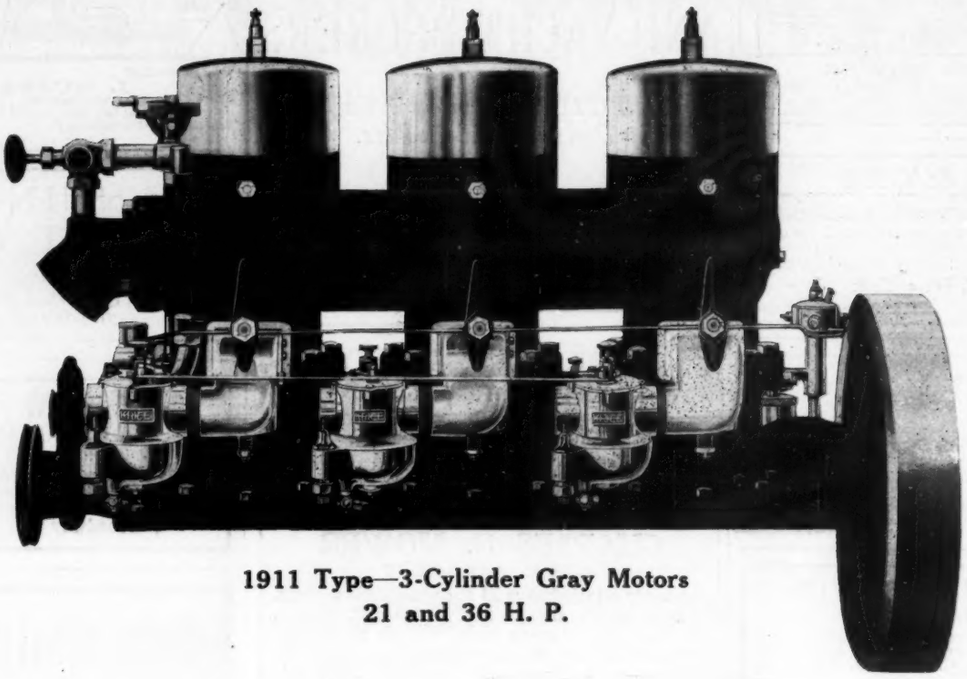

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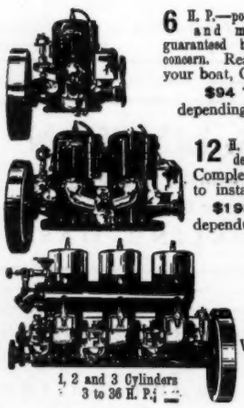

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Published Monthly. 25 cents per copy. $2.00 per year.
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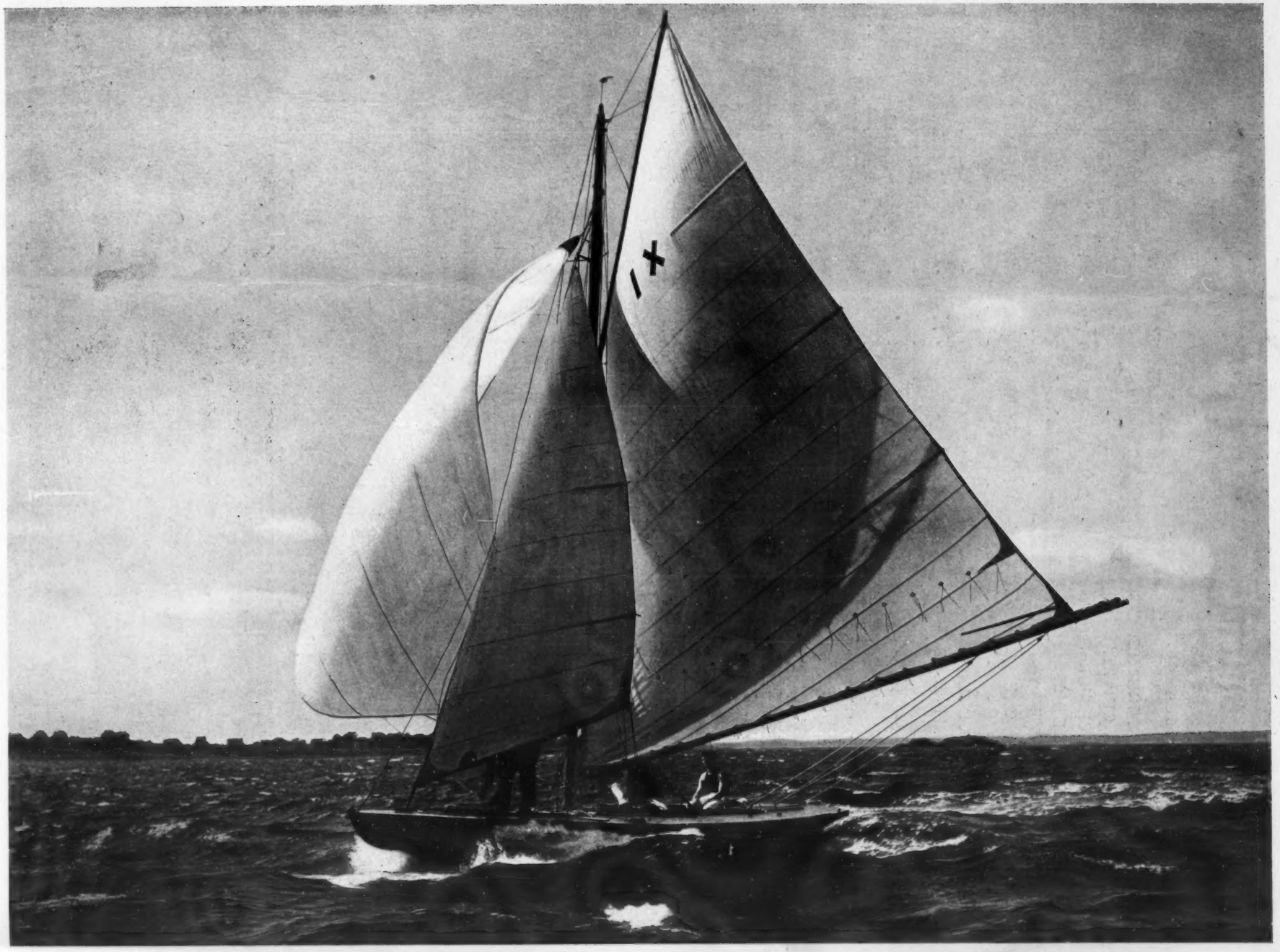

Photo by W. B. Jackson.

SALLY XI, ONE OF THE NEW SONDER BOATS, RACING OFF MARBLEHEAD ROCK.

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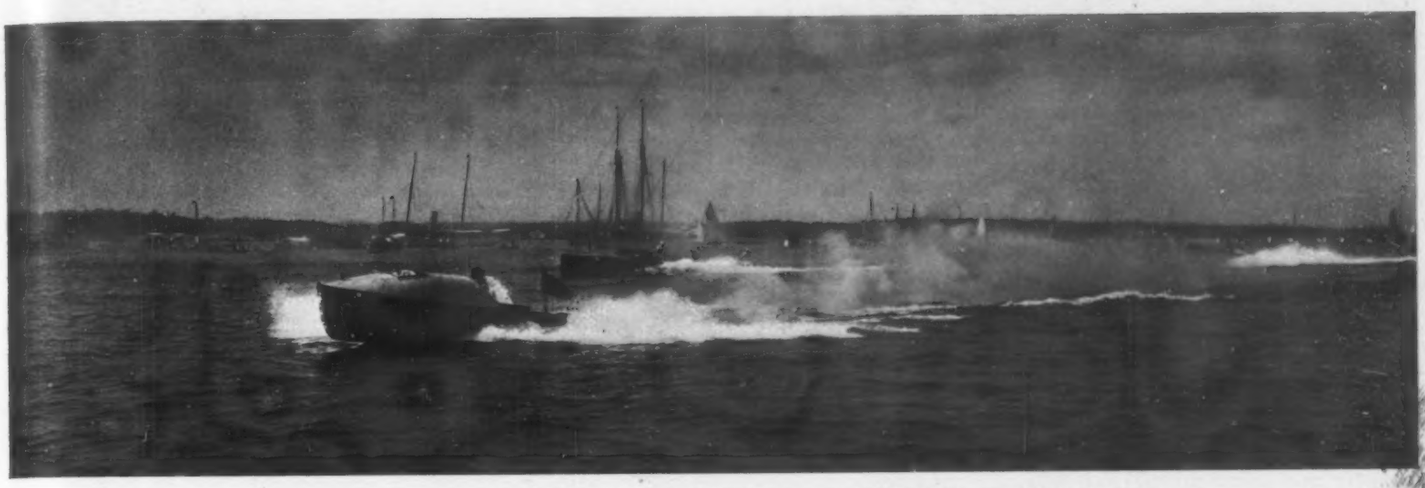


START OF THE RACE FOR THE BRITISH INTERNATIONAL TROPHY. ZIGARELLA FIRST OVER THE LINE.

Photo by W. B. Jackson.

The Race for the British International Trophy

By HERBERT L. STONE

IT must have been particularly disheartening to the little group of English racing men who came over for the race, and to the Duke of Westminster (who did not come) in particular, after the months of preparation and sending their boats over 3,000 miles to have the hopes of a season dashed in one short hour and their colors lowered to the same engine which beat them two years ago, now installed in the hull of Dixie III; particularly so as one of the racers, Pioneer, owned by the Duke of Westminster, showed herself throughout the race to be by far the fastest boat. It was chiefly due to the reliability of Dixie's engines that the cup stays in this country, and we are forced to admit it, more by good luck than by good management.

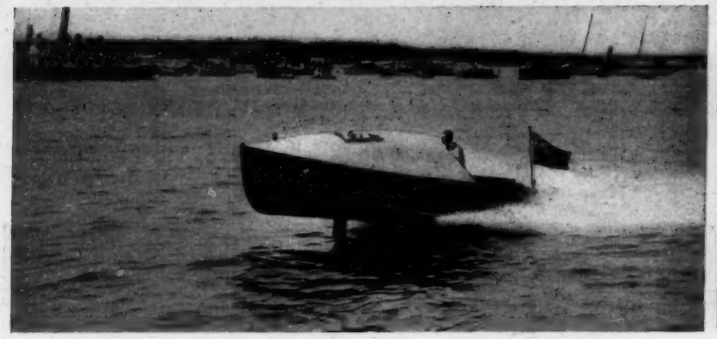
It was not known until the morning of the day of the race which boats would constitute the American team to defend the cup, owing to the very unsatisfactory series of elimination races held early in the week, which failed to bring out any boats to eliminate. That our main hope would be on Dixie was well known, as was the fact that Restless, the only other boat to appear at the trials, would also start. The third boat which was added was an unknown quantity with the appropriate cognomen of Nameless. What her capabilities were was not known before and are yet to be learned.

The English boats consisted of the Pioneer, owned by the Duke of Westminster, a big boat, standing high out of water with lots of freeboard, of a modified hydroplane type, powered by a 400-horsepower Wolseley motor; the Zigarella, owned by Mr. Daniel Hanbury, a little mahogany hydroplane, 26 feet over all, with a white hood or turtle deck that covered two-thirds of her length, and powered with a 110-horsepower, eight-cylinder motor; and the Maple Leaf, a low, rakish flyer, owned by Mr. E. Mackay Edgar. The latter boat, however, had been strained so badly in previous races that she was not considered fit to go over the course and was withdrawn at the start, leaving but two British boats to come to the line.

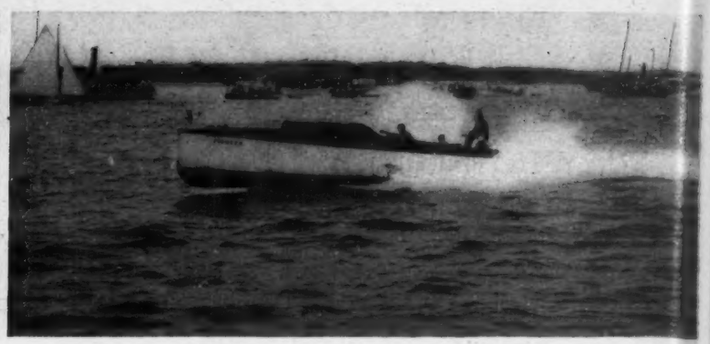
The race was scheduled for 2:30 o'clock on Saturday, August 20, and a big fleet of pleasure craft was on hand to see it. In this fleet was everything from a home-built launch, coming out of Bronx Kills to Mr. Billing's Vanadis, and from a Manhasset Bay "bug" to a ninety-foot schooner, with a few excursion boats thrown in. On both sides of the course these boats anchored, leaving a long lane through which the revenue cutters and launches flying the revenue service flag, went back and forth, keeping it clear. The course was a triangle, the first side being a straightaway of some two and a quarter miles to Huckleberry Island, where a wide turn was made; then back in mid-Sound for a five-mile stretch to a buoy off Parsonage Point where another wide turn was made to the last stretch back to the starting line. The total length of the course was ten knots and the racers had to cover it three times.

NEARLY EVERYTHING THAT FLOATED WAS AT THE COURSE.

There was some dissatisfaction expressed by the Britishers at the postponement of the start for an hour, but at 3:30 o'clock they were finally sent away. The Restless, having had some trouble with her engines did not start. The little Zigarella was first across the line at the gun,



ZIGARELLA AT TOP SPEED, SHOWING FORWARD RUDDER.



THE HELMSMAN OF PIONEER WAS PERCHED HIGH ABOVE THE FLYING SPRAY.

and gathering speed, she lifted out of the water as she planed, showing two-thirds of her underbody, with a sharp fin or rudder sticking from her bottom some third of her length aft of the bow. Then came Dixie a few seconds after, running smoothly and easily, as she always does, with apparently little effort. Then came the big Pioneer; with a snort and a roar like a battery of field artillery going into action she tore over the line and made after the American boat. It was some time before Nameless was started, and she crossed the line 29 seconds later.

Pioneer set a pace at first that has never been equaled in this country, and as she passed Dixie in the first 200 yards, the contrast was so great as to make the onlookers wonder what was the matter with the American boat. On she tore, her terrific speed being plainly apparent to the eye, although she left a clean wake and did not make much fuss in the water . Unlike the other boats, the helmsman, Mr. N. E. Robins, was perched high in the air at the steering wheel well aft of amidships, and could be plainly seen above the flying spray.

It took some time for the little hydroplane to get fairly started and she pounded down the first stretch, losing ground fast. Pioneer continued to draw away, and going down the back stretch was fully two miles ahead of Dixie and was gaining every minute, so that patriotic Americans saw the cup going back to England. She made the five-mile straightaway at a terrific speed, and rounded into the home stretch on the first lap, when suddenly she was seen to stop. Once stopped it did not take Dixie long to pass her, and as the American boat swept down the line at the end of the first round she was greeted by a din of whistles, horns and the mighty roar of voices. Dixie was timed at the finish of the first round at 3:49:50, having covered the course in 19 minutes and 50 seconds. After she had passed, it was some time before the next boat came along, and then it was seen that it was the little hydroplane Zigarella. It had taken her 22 minutes and 29 seconds to complete the round. She was doing better, however, and going very fast after Dixie as she swept by the committee boat.

The men on Pioneer were working like mad to fix the trouble, which was caused by seaweed choking the water circulating pump, and after some fifteen minutes she was again going. She was timed at the end of the first round at 4:05:23, and she fairly flew down the course in a vain endeavor to catch Dixie. Had the course been longer, or had Dixie's engine failed her, she might have done it, as she was undoubtedly miles faster than the American boat; but luck favored us. The times of rounding the home mark on the second lap were as follows: Dixie, 4:09:52; Pioneer, 4:22:59; showing that Dixie had taken 20 minutes and 2 seconds to make the second lap, while Pioneer had made the same distance in 17 minutes and 31 seconds, or at the rate of 33:64 nautical miles or 38:6 statute miles an hour.

The Nameless had quit at the end of the first turn of the first lap, and after making one-half of the second lap, the Zigarella gave out, and before the completion of the race was seen limping back at the end of a tow rope, leaving Pioneer and Dixie as the only boats in the race, and with Dixie's lead it was only a question as to her engine's holding out, whether or not she would win. Dixie's last lap was made in 19 minutes and 54 seconds, and after she had crossed the line, Pioneer slowed down her engine, making her lap in 20 minutes and 22 seconds. The following is the summary of the race:

BRITISH INTERNATIONAL CUP—COURSE, 30 MILES—START, 3:30

Yacht and Owner.	Finish. H. M. S.	Elap'd Time. H. M. S.
Dixie, F. K. Burnham	4:29:44	0:59:44
Pioneer, Duke of Westminster	4:43:21	1:13:21
Zigarella, D. Hanbury	Disabled.	
Nameless, Heckscher and Melville	Disabled.	

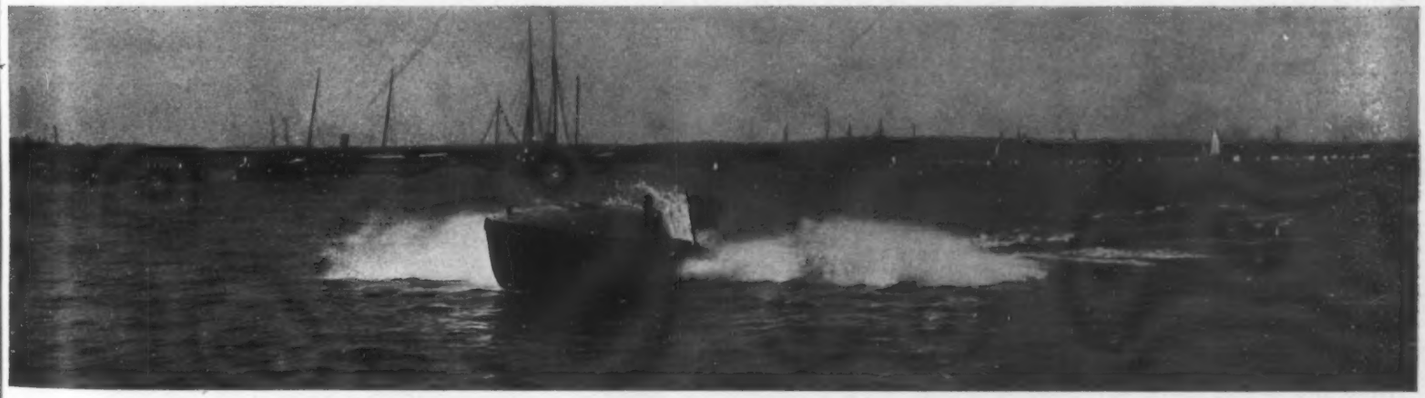
Dixie's time for the event was just a fraction over 30 nautical miles an hour. This was faster time than she made tywo years ago, when it took her 1:04:57 to cover the 30 knots, or at the rate of 27.75 knots. There is no discounting the fact that Dixie is a remarkable bat, as in all races on this side of the ocean she has fairly earned the name of "Old Reliable," and we doubt if there is any craft in this country that can show the consistent performance of the Burnham boat.

MR. FREDERICK K. BURNHAM AND ENGINEER RAPPUHN OF THE WINNING DIXIE.

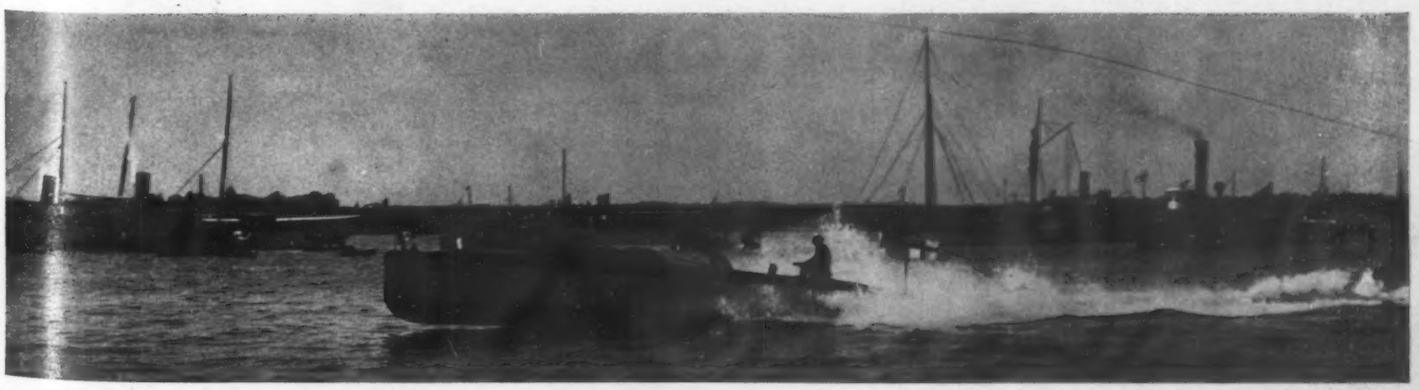
THE INTERNATIONAL COMMITTEE. FROM LEFT TO RIGHT, MR. H. P. SUTPHEN, MR. E. MACKAY EDGAR, CAPT. PIERCE.

DIXIE, THE "OLD RELIABLE," CROSSING THE FINISH LINE. MR. F. K. BURNHAM AT THE WHEEL.

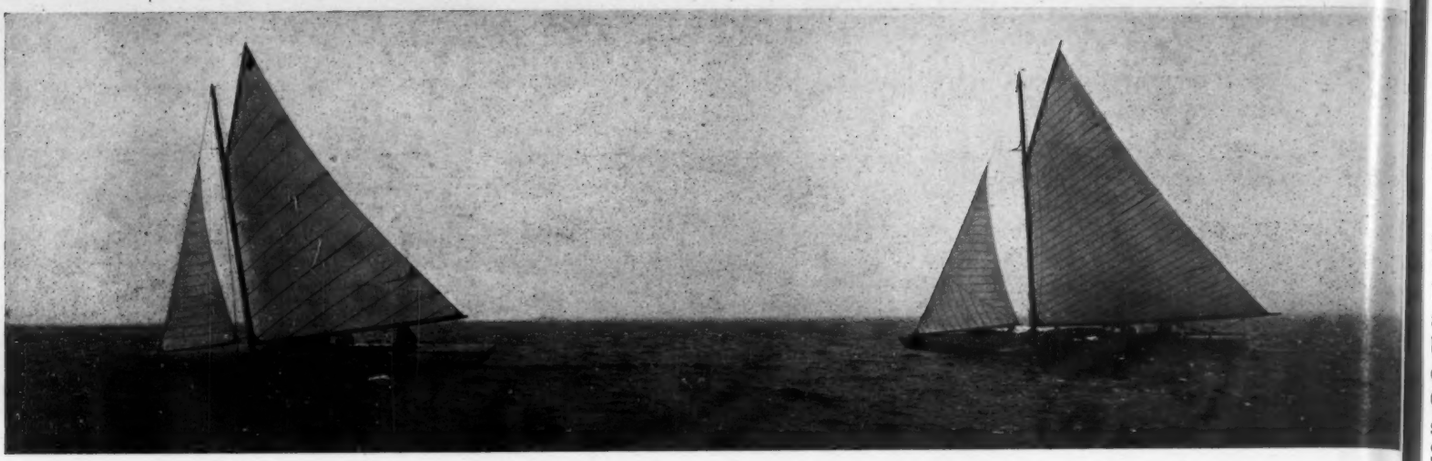
IMMEDIATELY AFTER THE START. NAMELESS, THE LAST BOAT ACROSS, IN THE FOREGROUND.



THE ZIGARELLA THREW GREAT SHEETS OF WATER FROM EACH SIDE AS SHE PLANED.



PIONEER'S TERRIFIC SPEED WAS APPARENT, THOUGH SHE MADE BUT LITTLE FUSS IN THE WATER.



START OF THE SECOND RACE, JULY 27. MASSACHUSETTS IN THE LEAD.

The Seawanhaka Cup Stays at Home

By C. H. J. SNIDER

Photographs by W. B. Jackson

TEN years ago the Seawanhaka Cup was the best-known piece of silverware in the small boat world; it was almost an unknown quantity this summer when the Manchester Yacht Club, of Manchester, Mass., had to defend it against the challenging Royal St. Lawrence Yacht Club of Montreal.

Ten years ago the annual contest for it excited interest second only to that aroused by an America's Cup contest. Foreign correspondents swarmed in Montreal, the local papers had fleets of despatch boats and armies of reporters and telegraph operators, and the yachting world rang with the names of Crane, Starling Burgess, Stephens, Jones and Laborde, and above all the invincible G. Herrick Duggan, who turned out defender after defender for Montreal which none could beat. Challengers came from the Atlantic seaboard, from the inland lakes of the Middle West, from England; but Duggan, designer and sailor, baffled them all. He won the cup in 1896 from the Seawanhaka Corinthian Yacht Club after Spruce IV, the English challenger, had failed to take it. Montreal got sick and tired of defending it against England and America, and felt positively relieved when in 1905 Manchester, designed by E. A. Boardman, of Manchester, Mass., carried the trophy away from its long resting place on Lake St. Louis. But in the interval the trophy has almost been forgotten, and its defense occasioned less stir, at the very scene of operations, than the local contest among the *sonder* boats did. The Seawanhaka Cup was lucky when it got a column in the Boston papers.

The cup never had a grip in Canada, except around Montreal. It evolved a strictly local type of scow, rather narrow, flat, bilge-boarded, double-ruddered, wet as a duck and fast as a gull, which had only a moderate degree of popularity on its home waters, Lake St. Louis, and scarcely any elsewhere. Only one Canadian candidate for the Seawanhaka Cup was built away from Montreal. One or two bilge boarders have been built in Toronto for Lake Ontario and for Lake Winnipeg, but the type has not prospered and is barred by some of the lake-sailing bodies. So that Montreal has been left alone in the designing field, and for the last five years, or even longer, there has been no progress in improving the type. Duggan always had another wrinkle up his sleeve until he produced Dominion, with one hull and two waterlines. They barred the double waterline idea by mutual consent afterwards, and Duggan's business took him away from Montreal later. After Fred. Shearwood hit on the bilge boards in place of the centreboard, the last idea in the Montreal type of Seawanhaka Cup boat was reached. Boardman

THE CANADIAN CHALLENGER, ST. LAWRENCE.

turned out a slightly faster craft when he won the cup with Manchester, and since then Montreal has done no development work on the idea. This year's challenger, St. Lawrence, shows no departure from the last defender, Alexandra.

The Canadian crew on St. Lawrence were good sailors, but, frankly, they did not show that keenness which they have displayed in former contests. This is not intended as any disparagement of their skill or judgment, for it should always be remembered that it is much harder to do the same things as well abroad as at home. St. Lawrence found the long ocean swell distinctly baffling. Nothing like it ever happens on Lake St. Louis. Local conditions were distinctly unfavorable, both to boat and crew, and Canadians understood, after the contest was over, why it was that so many challengers tried and failed in earlier years on Lake St. Louis.

The boats are measured by dividing their waterline length and the square root of their sail area by two. Their official dimensions compared thus:

Massachusetts, sail area, 616 sq. ft.; waterline length, 23.12 ft.; rating, 23.91.

St. Lawrence, sail area, 625 ft.; waterline, 23.91 ft.; rating, 24.5.

Both are very low, flat craft, but Massachusetts had much the advantage in looks. She has enough sheer to save her from the raft-like appearance of St. Lawrence, and her bow is considerably finer, both in contour and at the waterline. St. Lawrence is very full in the bilges and has considerable shoulder to her bows, for which every ocean roller made her pay toll. Ribs and planking are shaved down to a minimum in both, and a strong deep backbone runs longitudinally for strength. The contestants were sailed by the following crews:

MASSACHUSETTS, WHICH KEPT THE SEAWANHAKA CUP IN THIS COUNTRY.

Massachusetts: Skipper, E. A. Boardman (her designer); R. D. Boardman, mainsheet; John L. Saltonstall and L. A. Wordsworth, headsails.

St. Lawrence: C. H. Routh, skipper; W. C. Finlay, mainsheet; Huntley Gordon and Ross Hutchins, headsails.

The judges were Messrs. Æmilius Jarvis, Toronto; Louis M. Clark, and Reginald Boardman.

It took four races to decide the fate of the Seawanhaka Cup this time, and it almost took five, but this was on account of the fickleness of the wind gods and not from the closeness of the boats.

First Race, Begun July 25.

The first contest of the series was sailed on July 25 on the Atlantic Ocean, between Manchester and Marblehead, and began in a splendid southerly breeze of wholesail strength. The judges gave them the gun at 2:10, and the American defender led over the line by about five seconds, and at once commenced to foot away from the challenger in the windward work, which the first leg of the four-mile triangle gave. Every tack was a Massachusetts gain, and soon the defender abandoned the formality of tacking ship whenever her opponent did, and went on about her own business.

The contestants thought the legs of the triangle long, but the judges insisted that the proper distance was logged, and the uncertain character of the winds, which prolonged the agony, may have stretched the course to the imagination. At the end of the first leg of windward work Massachusetts led by over a minute, the time of the turn being: Massachusetts, 2:30:13; St. Lawrence, 2:31:17, showing a gain for Massachusetts in a mile and a third of windward work of one minute four seconds.

A couple of very well developed thunder squalls were by this time playing tag high up in the air over the ocean, and as a result the next leg, which began as a broad reach with sails on the port side, developed into an uncertain course. One squall blew over aloft, killing the true wind. The racers turned the second buoy thus: Massachusetts, 2:-41:39; St. Lawrence, 2:42:38. St. Lawrence's gain in reaching, five seconds.

Canadians plucked up heart a little as they noted the challenger's lead had been reduced to fifty-nine seconds, but there was no cause for American alarm. The next leg was at times a reach, and at times a beat, and, while luck may have had a little to do with it, the defender steadily drew away in the unsteady air and lumpy, rolling sea left by the dying flurry of the first squall. The first round of the triangle was completed in this order: Massachusetts, 3:13:20; St. Lawrence, 3:18:10. Massachusetts' gain in the last leg, three minutes, fifty-one seconds.

The triangle had to be sailed over three times, and the shifting wind made the first leg a reach, sometimes broad and sometimes close, in which St. Lawrence held her own fairly well. The time turning the first mark again showed a gain for Massachusetts of two seconds. By this time the second leg of the course was to windward and the breeze was blowing a lively fourteen-knot clip, making the crews hike out on the weather bilges until they did not seem to belong to the decks of the racers at all. Massachusetts got away further—she was now leading by five minutes—and when they turned the second buoy for the second

MEASURING THE RACERS THE DAY BEFORE THE START.

time, Massachusetts had gained twenty-two seconds more.

The boats started for the home mark in a breeze puffy and wavering with the approach of the second squall. Clouds piling up in the west drew nearer and nearer, until the trees along the rock-ribbed shore were embedded in masses of blue-black vapor, through which chain lightning played incessantly. The ocean changed to a lurid green, against which the creamy sails of the racers seemed to fairly burn with a white, clear light. Then the clouds opened with a rip-rip-rip-rending crash and everything was blotted out by the great curtain of the rain.

Massachusetts stripped to bare poles ere the squall broke, and the challenger, rolling helplessly half a mile astern, followed suit. There was very little wind in the squall, but any amount of water. It poured and poured and poured. St. Lawrence's tender came alongside, and despairing of even finishing the race within the time limit, she took the line aboard and towed in. Massachusetts gamely hoisted her sodden sails and made an attempt at crawling around the remainder of the course, but the rain had killed all the wind, so she too accepted a tow, and the first race was off, but not over.

First Race Sailed, July 26.

Next day the judges sent the contestants over a four-mile triangle again, the breeze this time being fresh, and the first leg of the course a run to leeward with spinnakers on the starboard side. St. Lawrence had two suits of sails for the contest, and changed over night from her Toronto suit of orange-colored silk to a pale straw-colored one, imported from England and showing a decided improvement. The change in the color of her sails made the racers almost exactly alike at a distance. Skipper Routh led over the line by at least three lengths this time and kept St. Lawrence ahead all the way down to the first buoy, where the time was: St. Lawrence, 2:18:55; Massachusetts, 2:19:02. St. Lawrence's gain, seven seconds.

The next leg was a beat to the stake buoy off Baker's Island, and as soon as St. Lawrence hauled on the wind she got into trouble. The head-lacing of the mainsail parted on the gaff and raveled out from the throat as far as the bridle of the peak halyards, leaving about half the head of the sail properly laced and the rest of the canvas sagging off to leeward. Massachusetts passed ahead and to windward amid Yankee cheers. The boats worked towards the next mark in long tacks, the defender gaining all the time, until at the turn she had picked up one minute and thirty seconds, the time at the buoy being: Massachusetts, 2:42:29; St. Lawrence, 2:43:52. On the close reach back, completing the triangle, St. Lawrence a little more than held her own, the time at the end of the first round being: Massachusetts, 2:48:36; St. Lawrence, 2:49:58. Massachusetts was now leading by a minute and twenty-two seconds, St. Lawrence having gained six seconds on the reach.

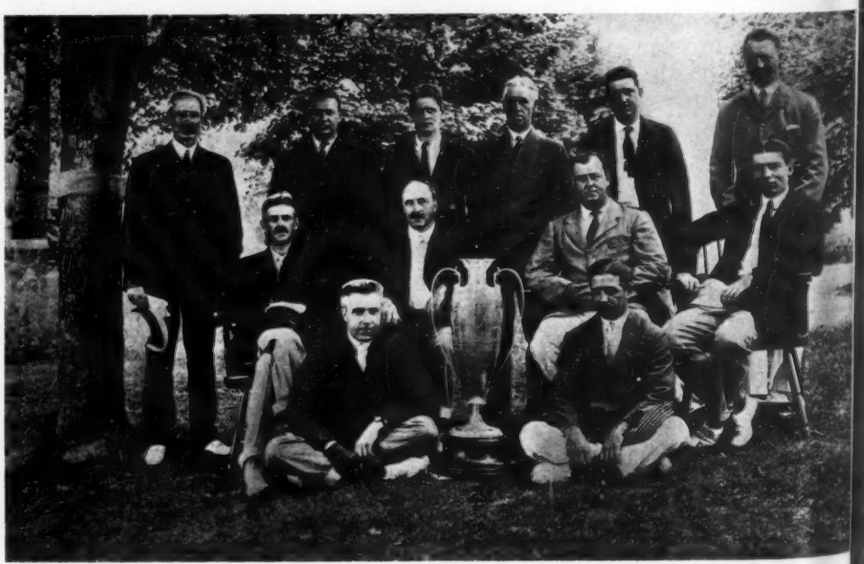
On the next spinnaker run, St. Lawrence, although taking two minutes and twenty seconds to set her spinnaker, while Massachusetts did the same work in fifty-five seconds, gained nearly a third of a minute.

Of course in the windward work on the next leg Massachusetts forged ahead on every tack. She gained a minute and eight seconds in the beat and was leading by two minutes and twelve seconds as they turned the buoy, the time being: Massachusetts, 3:22:12; St. Lawrence, 3:24:24.

The yachts were reeling off the distance at power boat speed for the close reach home, sailing at between 12 and 13 knots, with St. Lawrence heeled until the clew of her mainsail dragged in the seething wake to leeward. Massachusetts gained eight seconds in this wild tear, the boats completing the second round as follows: Massachusetts, 3:28:34; St. Lawrence, 3:30:54.

St. Lawrence made the mistake of trying to sail the next broad reach without a spinnaker, and in consequence Massachusetts gained thirty-four seconds on the run. She was by this time three minutes ahead and St. Lawrence's mainsail almost left the gaff, the lacing parting further until the sail was held only by the

(Continued on page 243)



THE CREWS OF THE COMPETING BOATS AND THE JUDGES OF THE SERIES.

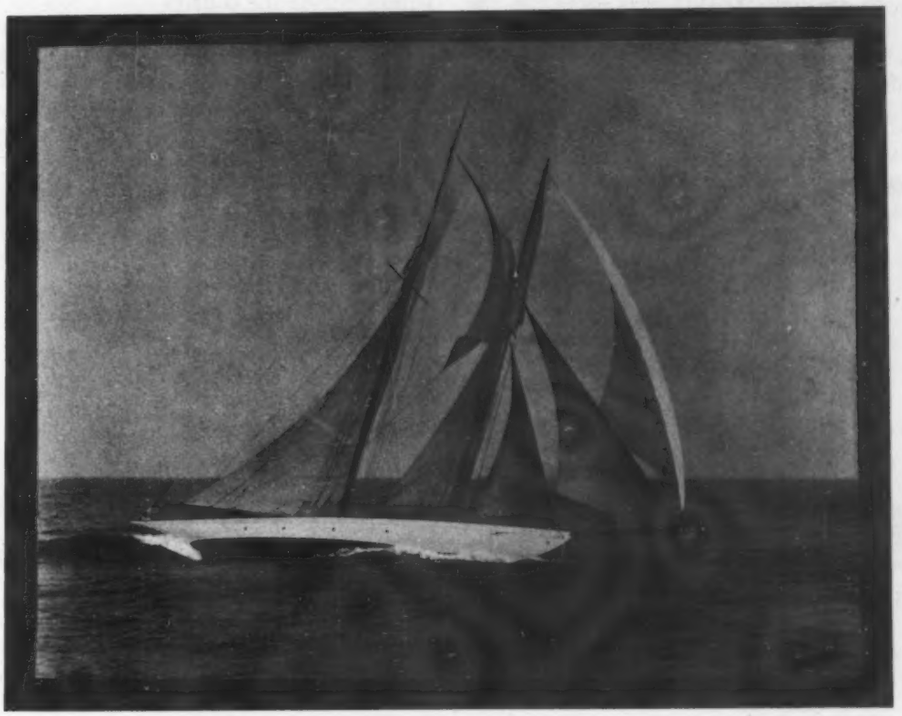
The Mackinac Race of 1910

By J. M. HANDLEY and WILLIAM HALE THOMPSON

Photographs by William Hale Thompson, Harry Higinbotham and R. H. Hall

WHEN a sailor is born with the soul of a poet and writes the great epic of the yachts, he could not have a better subject than the Mackinac Race of 1910 of the Chicago Yacht Club. It would be a narrative to stir the blood of the jaded; the story of a race so full of incident, so alive with opportunity and sailed in such a breeze as to warm your heart, ye sailors bold.

They can say what they please of old Michigan, but it is a bully old pond for surprises, and the unexpected is what it generally hands the devotees of the sailing game. Blow high, blow low, it is never the same, and in its moods it is as fanciful and capricious as any spoiled jade. That is one of the fascinations of it—the uncertainty. This year, when the fleet hauled out to the line for the start of the Mackinac thrash of 331 miles, as the steamers log it, the sailors who had scanned the weather reports and the indications of sky and barometer saw little that encouraged them to believe that they were in for a record-breaking run. Before they had sped across the line very far, the desired turn came, and from that time to the moment, 31 hours 24 minutes and 6 seconds later, when Wm. Hale Thompson's beautiful schooner Valmore crossed the finishing line between the sand spit of Mackinac Island and the light on Round Island, there was something doing every minute of the time. Thirty-one hours for 330 or so miles, my masters, is some pace if you will, and when the varying conditions are taken into consideration you will realize that it was some race that was sailed.



VALMORE, FOR THE THIRD TIME WINNER OF THE MACKINAC CUP.

To William Hale Thompson, who captured his third successive Mackinac Cup race with his schooner Valmore, all honor belongs. He sailed a wonderful race; a game, heady, winning race. To Dr. W. L. Baum, whose misfortunes with the luckless Amorita have become proverbial, praise and sympathy belong. He, too, sailed a splendid race until a bit of bad luck placed him out of the running and brought him in nearly an hour behind Valmore. Last year a bad roll caused his spinnaker pole to drop into the water, and in the narrow and difficult Manitou passage between the Manitou Islands and Sleeping Bear, it snapped off short. By the time he had cleared away the wreckage he had lost a commanding lead and, minus a spinnaker pole, he dropped steadily back. This time a sudden lurch and a wild yaw on a big sea caught her with all kites flying and spinnaker set, and she jibed standing. That she did not lose all her spars is the wonder of wonders, for the young gale was hustling the boats along at a thirteen-knot gait and only heroic work on the part of an active crew saved the sticks, but the spinnaker pole again was snapped off beyond repair and the huge spread of shimmering canvas wrapped itself around the hull, fouled the rudder and had to be cut away in shreds in order to release it. It was the fortune of war, and the game commodore of the Chicago Yacht Club saw his high hopes go glimmering again when Valmore swept past him and down to the finishing line at steamboat speed. Lamely Amorita took up her task and finished, hard sailed, not far behind the rival that has twice beaten her for the honor.

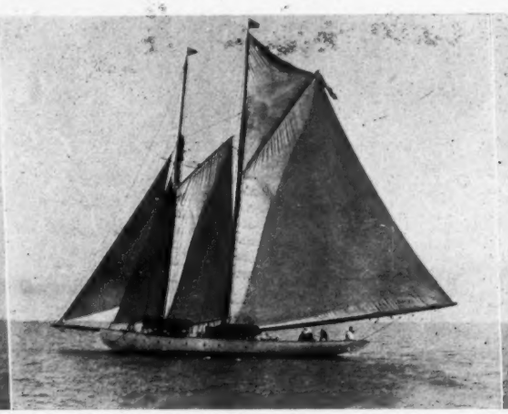
It was a heart-breaking race to lose, a race that tested nerve and head and soul; a race before a wind that averaged from twenty to forty miles (and in the puffs even more) to the hour, with kites all set and balloons and spinnakers nearly every foot of the way. Many hours of it was sailed in an inky darkness, with a mighty following sea that lurched the great quivering hulls into inky depths and tossed them on spume-strewn wave crests with swerves that tested the metal of the man at the wheel and slammed about the canvas on the towering masts in a fearsome manner. A two-hour trick at the wheel was all that most of the hardened sailors cared to undertake, and in all that long run not a man snatched a wink of sleep, not a member of a crew but was on the alert for the unexpected.

Saturday, July 23, dawned hazy and unsettled. Great banks of wind-driven clouds came out of the southeast and an early wind began piling up a sea that tossed and tumbled over the government breakwater that protects the harbor of the yacht clubs. By noon the wind had gone up to a gait of thirty miles, and this held until about two o'clock, when it dropped down to twenty-five miles, veering a bit southerly until it was just east of south. "Schooner weather," said the wise men as they took stock of the probabilities. By two o'clock the racing yachts had been inspected, the crews taken aboard and the Sea Fox, Joy Morton's steam yacht that was to act as judges' boat, had slipped her moorings and gone to the outer end of the imaginary line marked by buoys due east and west from the Chicago Yacht Club outside the breakwater. Soon after the boats, one by one, slipped outside to "feel" the wind, and working topsails were set on the schooners.

Ten boats had accepted the gage and went out to the line. They were William Hale Thompson's Valmore, winner of the race in 1908 and 1909; Dr. W. L. Baum's Amorita, flagship of the Chicago Yacht Club; James O. Heywarth's schooner Mistral, a former winner; McConnell & Clinch's schooner Hawthorne; George Tramel's sloop Vencedor, twice a winner; George R. Steere's yawl Vanadis, a former winner; Roy Barcal's sloop Illinois; Edgar Lee's sloop Evanston; H. A. Sellery's sloop Josephine, and Soule Brothers' and Hill's little yawl Naiad, which once came within a few minutes of winning the race on time allowance. All but Evanston flew the burgee of the Chicago Yacht Club, the latter being the sole representative of the Columbia Yacht Club. Maneuvering for a start furnished the large gallery of steam yachts, motor boats and guest steamers with a pretty sight. Heeled down until lee scuppers trailed in the seas, with towering canvas stretched to its limit, the jockeying was unusually good. Skipper "Sport" Herrman, of Evanston, handling the active thirty-five-footer with consummate skill, was up to the line in the best of form, and as the gun barked its order to go ahead, the Columbia Yacht Club representative tore over the line and broke out a big balloon jib, setting a course for inside the Government breakwater of the harbor of refuge. Dr. Baum had Amorita in splendid position and the big steel schooner foamed over the down. But the wild pace kept up unchecked, and Amorita, wallowing in the tumble of sea and wind, forged steadily ahead of her rivals. The boats that held inshore found a southwesterly breeze and jibed their sheets, setting balloons and holding the racing leaders in great shape. Off Evanston the outer boats began to feel the westerly slant, and steadily the wind veered until it blew straight and true out of the southwest, growing in volume and power every minute, until at sundown a howling gale out of that quarter was flattening down the sea at a great rate, and the whole fleet under balloons and spinnakers were tearing down the lake like kestrels before a "norther." The log of Amorita showed that several times she had a speed of thirteen knots to record, and as Valmore was holding her pretty well, she must have been sailing pretty close to that mark. When night fell Amorita had assumed a commanding lead, with Valmore next. Vencedor had dropped back considerably, and that wonderfully able yawl, Vanadis, and Hawthorne were fighting it out behind Valmore, with the rest strung out on the course.

The night was one of tremendous strain on every boat, but particularly on the leaders. The wild rush through the night at a speed that sailing yachts rarely achieve and with towering masses of canvas straining like mad at their sheets, kept every member of every crew on deck. Watches were forsaken, except

LITTLE ILLINOIS MADE A GAME FIGHT.



AMORITA AGAIN HAD HARD LUCK.

VENCEDOR TOOK SECOND PRIZE.

line with the crew jumping like a perfectly trained team to the sheets, easing the big two-sticker's canvas as she set her nose for the outer end of the breakwater. Barcal had Illinois well up and was next over, but a hard puff caught her big mainsail, causing her to luff a bit and she ran foul of the starting buoy, capsizing it. Valmore, right behind her, was fourth over, and then came Hawthorne, Mistral, Naiad, Vencedor, Vanadis and Josephine. Naiad and Illinois took the inside course, the others all following the lead of Amorita. Past the light the course for Point Betsy was set on the Amorita, and as soon as the wind direction was ascertained positively, balloon, maintopmast staysail and spinnaker were broken out on the Baum yacht in most seamanlike fashion. Vencedor, anxious not to let the schooners get away, sent up a big club topsail, and Tramel set his big mahogany sloop down for a hard run. The sloop had been almost entirely rebuilt this season and given a new set of canvas, and she heeled to her work in magnificent style, but the flying leaders had too much for the wonderful old sloop and they seemed to be drawing away from her all the way. The speed was tremendous from the start. A high-powered motor boat, capable of negotiating her twelve miles an hour under any conditions, could not hold the leaders and dropped astern every minute, although pushed to her utmost with a following wind and sea. So some idea may be gathered of what a pace the racers were setting.

As the leaders hauled further on their course they found a fresher slant, but more easterly, and the spinnakers had to come for relieving the man at the wheel, and everyone lay on deck watching the shimmering canvas clouds towering far overhead, fearful of the slant that might bring that whole straining mass of fabric about their ears. As the boats drew out from the west shore the force of the wind piled seas half-mast high after them, and every downward swoop into the abrupt waves was watched ceaselessly for the peril to slender spars it might bring with it. It is one of the things Lake Michigan is famous for—this quick rising of the angry waters when winds compel. I have seen a big sea kicked up in two hours, a sea that sets the great lake steamers rolling and wallowing in the trough if they are running across it, and full of menace to sailing craft, for one whipping sea is hardly spent before a new wind will have set a cross sea running that is hard to gauge and hold a true course in.

It was just after eight bells of the middle watch had sounded that Amorita had the accident that disabled her so as to kill her chances. Topping one of the enormous seas she swerved suddenly and yawed wide. The mainsail caught the back slant, and in the twinkling of an eyelash the great snapping mass of canvas had jibed standing. A mad scramble for the backstays saved the mast just in time, but the spinnaker pole with its enormous silken sail plunged into the seas and snapped off with a report like a small cannon. In the inky darkness clearing away the wreckage was a difficult and arduous task, but it was accomplished in wonderfully quick time. The sail wrapped around the hull had to be cut away and the wreckage of halyards, stays and guys cleared

WORKING OFF A LEE SHORE ON VALMORE BEFORE THE SQUALL OF SUNDAY.

VALMORE WITH THE WIND DEAD AFT.

ON DECK OF AMORITA AFTER HER GREAT RACE.

while the boat was tearing on toward its destination at twelve miles an hour. Mr. Van Nostrand, a member of the amateur crew, in trying to clear the mainsheet, was caught in the tense snarl of ropes and his arm and face badly lacerated. With the spinnaker pole gone and no way to set a sail to balance the enormous mainsail, it was found that Amorita could no longer be held on a true course, and Commodore Baum was compelled to haul on the wind and run across the seas. Amorita will not sail wing and wing under the most favorable conditions, and to attempt it in such a sea was absolutely impossible. The rest of the night was a trying one on the crew. Worn with the stress of events and disheartened by the misfortune that seems to dog their efforts, the crew settled down to make the best of things, hoping for a change of wind that might permit of sailing to advantage without a spinnaker.

Dawn saw the sand hills of Michigan looming up on the starboard bow, and by seven o'clock Point Betsy hauled in sight. As the early morning haze was dispelled, Valmore was seen on the horizon, hull down, coming great guns, with balloon and spinnaker shimmering in the sun, and the faint hope that as the day progressed the wind might haul a bit and still give Amorita a chance grew fainter. The wind held true out of the southwest, and not far beyond Point Betsy, Valmore came abreast and passed Amorita with every stitch of snowy canvas rounded and pulling like wild horses. Opposite the Manitous she passed Amorita and sped on down the straight, never to be headed. Later in the day the wind softened a bit and hauled more to the westward, but that only helped Valmore, for she held on to her balloon canvas all the way into Mackinac, where she finished at 10:24:06 Sunday night, after a run that has never been equaled on fresh water, and which I doubt any salt water racing can equal.

So early was the arrival of Valmore that the lookout had been barely set at Mackinac, and when her Coston signal was seen from the judges' tent off the sand spit on Mackinac Island, they could hardly believe that one of the yachts was actually finishing. At 11:11:10 Amorita's lights flashed across the line. She had made a wonderful passage in spite of her inability to carry light canvas, having lost only 47 minutes and 4 seconds in the run of over 100 miles from South Manitou. That, barring accidents, Amorita would have won the race seems assured, for in spite of the delay caused by clearing away the wreckage and the cross course she had to sail from midnight to 7 o'clock in the morning it took Valmore all that time to catch and pass her. Had she been sailed to a finish successfully it is believed that she would have set a record for the Mackinac course of close on to 28 hours.

Vencedor, which passed Hawthorne soon after night fell, was the third boat to arrive and took second place from Amorita on time allowance. She, too, made a remarkable flight, beating her former record of 37 hours 54 minutes. The corrected time for the various boats that finished was given out as follows: Valmore, 27:45:52; Vencedor, 29:44:59; Illinois, 31:03:46; Josephine, 32:10:16; Amorita, 32:11:10; Hawthorne, 32:32:36; Naiad, 32:52:54; Mistral, 34:02:58; Evanston, 34:47:00. Vanadis was compelled to give up the race, running into Frankfort on account of the serious illness of a member of the crew.

The Race From the Deck of Valmore.

BY WILLIAM HALE THOMPSON.

Man and boy I have sailed for over twenty years on yachts of every description and size and under almost all imaginable conditions, but in all my life I have never sailed so fast as I did in the memorable Mackinac Cup Race of 1910. I once spent a night beating out of the Bay of Fundy in a howling gale, and several years ago when I sailed the old Mistral in the Mackinac race I thought I was running into pretty stiff going, but the night of July 23-24 on Lake Michigan was the wildest, most nerve-biting sailing I have ever experienced or ever hope to see.

YACHTING has asked me to tell my story of the race. It is a story soon told, yet if I were to linger on the incidents of that eventful 31 hours and a half, during which we sailed probably 350 miles from Chicago to the finishing line under the brow of

AMORITA CROSSING VALMORE'S BOWS ON SUNDAY MORNING.

WILLIAM HALE THOMPSON, OWNER OF VALMORE.

CLEANING UP DECKS AFTER A WILD NIGHT ON VALMORE.

Mackinac Island, I could fill a good many pages of mighty interesting reading. For the benefit of those who saw the race from a spectator's standpoint, I will try and give you an idea of how we made our great run—for it was a great run, a run any sailor might be proud of. And if I say so, it is only in giving credit to a wonderful little boat and a cracking good crew and not in a spirit of boasting. Personally I felt the keenest sympathy for Dr. Baum, who is as game and fine a sailor as it has ever been any man's good fortune to call friend, and the only tinge of regret in my third winning of the race lies in the defeat of his splendid Amorita, which with better racing luck would and should have won this year's race.

When we got going Saturday afternoon none of us anticipated any such blow as we had and we ran up our big kites and settled down with the booms to port and spinnaker to starboard for a run right on the course, so as to take advantage of every puff of the southerly wind that we expected to see fall at almost any time. As the evening hours came, however, the wind freshened and the sea, that was already tumbling along at a whopping big rate, kept getting bigger and bigger. The wind also hauled more to the westerly, finally settling down to blow in earnest from S.S.W. We found we could hold a course a little higher than Little Point Sable and held on with club topsail, balloon jib and spinnaker drawing like wildfire. It was a beautiful sight when the evening sun set red and angry in the west as the rounded billows of canvas tugged at their sheets, tinged with the glow of the fading day. About this time we picked up Pere Marquette Steamer No. 5 that runs to Ludington, and as she was right on our course we had a mark to hold on; but to our surprise as the wind freshened we held right on top of the steamer and she couldn't lose us.

The wind kept getting fresher and fresher, and by 9 o'clock we were logging at times 15 miles an hour. Steering in that heavy sea and wind was so exhausting that none of us were hungry for very much of it at a time, and although I weigh 200 pounds and am pretty well hardened, two-hour stretches were all I cared for. Luckily I had a splendid alternate in Morrill Dunn, whom I consider one of the best amateur sailors we have, and he and I "spelled" each other through that terrific night of howling wind and mountainous waves, driving Valmore to the limit.

Shortly after midnight we made out the light of Little Point Sable. The wind working to westward was forcing us off our course on to a bad lee shore, and when we found we couldn't hold the course any longer with any degree of safety I decided to jibe. With a club topsail set it was some undertaking in that wind, which at this time must have been blowing over forty miles an hour. We managed it successfully and stood out. When about half way to Big Sable a nasty looking squall began forming off in the northwest. I decided we had too much canvas on with the shore so close under our lee and ordered in the spinnaker balloon jib and club topsail. Soon the squall was coming down on us at a great rate and I had the mainsail doused. It struck just after we got the sail stowed, and for about 20 minutes we were close hauled under foresail and fore staysail on a squall that must have been blowing at the rate of 60 miles an hour. It was a corker. Then came the rain and the downpour killed the wind. After the rain it began to get daylight and we picked up a fresh breeze from the northeast, and setting our four lowers, then fore and club topsails, we scudded along under the high hills of the Michigan shore at a fine clip. As the haze lifted and we made out Frankfort looming up on our starboard bow we saw a schooner well out in the lake running in towards shore. It was so hazy that we could not be sure of her identity, but later, when she came up a bit, we made her out to be Amorita. We could not understand why she should be holding in toward shore like this, and feared that someone might have been badly hurt during the squall and that they were running in for a harbor. When we were opposite Frankfort she passed across our bows, holding in shore, and later she came about and went under our stern so close

(Continued on page 242)

Vagrant Wins the Bermuda Race

AFTER much uncertainty as to whether or not there would be a sailing race to Bermuda this year for the handsome trophy offered by Mr. E. J. Bliss, of the schooner Venona, the former Bermuda winner, two boats, the schooners Vagrant, Mr. Harold S. Vanderbilt, and Shiyessa, Mr. Demarest Lloyd, were sent away from the Atlantic Yacht Club at Gravesend Bay at 4:50 p. m. July 9. A third entry, the schooner Uncas, had been received, but the boat was withdrawn before the start. To add to the uncertainty the start had been postponed from July 2d to July 9th to suit the convenience of the entries. Even then it was not until late in the afternoon that they were sent away.

Although only two boats started, interest in the race was heightened by the fact that one of them was a new Herreshoff creation, and yachtsmen were anxious to see what a new boat from this shop could do in an ocean race.

The wind at the time of the start was southwest, and it continued in that direction through nearly the entire trip with light breezes, with the exception of a short time on Monday evening, when it freshened and blew hard for several hours. In spite of their lightness, the leading winds enabled the yachts to make a fairly fast race of it; the boats finishing on the morning of July 13, Vagrant taking 90:42 to cover the 670 knots and Shiyessa 93 hours, an average of something over 7 knots an hour.

The days' runs of Shiyessa from Ambrose Lightship, whence she took her departure at 7 p. m. Saturday, were 137 knots to Sunday noon; 219 knots to Monday noon; 202 knots to Tuesday noon, and 101 knots from there to the stake-boat off St. David's Head, which she made at 1:50 p. m., New York time, Wednesday.

The best day's run of the Vagrant was 245 knots, which she made between noon of Monday and Tuesday, July 11 and 12.

Mr. Lloyd on the Shiyessa thought that he had won the race up to the last day, as within 5 hours of the finish Shiyessa was the leading boat with Vagrant some miles to leeward. While in these positions the wind changed from southwest to southeast, putting Vagrant to windward. She, of course, got the breeze first, while Shiyessa lay becalmed without a breath for some 4 or 5 hours. The former came down from the eastward on a long tack to the mark, and in very light breezes Shiyessa crossed the line 2 hours and 18 minutes later, being beaten on corrected time by only 48 minutes.

The dimensions of Vagrant are 56 feet on the water line, 76 feet over all, 17 feet 6 inches beam and 10 feet 6 inches draft. On board with Mr. Vanderbilt were Clarence L. Hayes, Aymar Johnson, Oliver Iselin, Jr., and J. H. Collins.

The Shiyessa is a wooden schooner 50 feet on the water line, 75 feet over all, 16 feet beam and drawing 9 feet 9 inches of water. With Mr. Lloyd were Prof. John B. Cole, of Harvard, who acted as navigator, John G. Alden, the naval architect of Boston, Carroll Perkins, John Kelley and C. Cowles.

The summary of the race follows:

Start, Saturday, July 9, 4:50 p. m., off Sea Gate.
JULY 13, A. M.

	Finish.	Elapsed.	Corrected.
Vagrant, H. S. Vanderbilt	11 32 00	90 42 00	90 42 00
Shiyessa, D. Lloyd	1 50 00	93 00 00	91 30 00

The finish is New York time.

The Dry-Cell Battery

HOW DIFFERENT COMBINATIONS VARY THE VOLTAGE AND AMPERAGE

By E. T. KEYSER

THIS is not a technical article on dry-cell ignition, but just a few words addressed to the novice who in his new boat has discovered, stuck away somewhere in a soap box, a half dozen dry cells, and who would like to know how to get the best service from them.

One can do a lot of stunts with a dry-cell battery if it is treated right, and can also put that same battery out of business in record time if undue liberties are taken with it.

First put your battery in a dry place, and see that this place *keeps* dry. Next, it is a good idea to sit down and figure out just what service is required of your batteries, and then arrange them so that they will give that service.

It isn't possible to have too much amperage, but it is quite possible to have entirely too high a voltage. A lack of realization of this is the basis of a good many troubles that assail the novice during his first year afloat.

I don't know that I can give a better illustration of the relation between voltage and amperage than to consider the battery as a tank. The amperage is the amount of electricity that you have stored in the tank, and the voltage is the pressure of the flow from which you draw it. For instance: if you put a hundred gallons of water in a tank and draw off through an opening of a certain size at a certain speed, the water supply will last for a certain definite time. If, on the other hand, you double, treble or quadruple the size of the spigot you will obtain twice, three times or four times, respectively, the flow while the supply lasts, and the supply itself will only last one-half, one-third or one-quarter as long, provided the speed is the same.

The capacity of the tank corresponds to the amperage of your battery; the size of the spigot corresponds to amperage discharge; the voltage to the speed of the flow. A dry battery is a mighty convenient thing, inasmuch as by wiring it in various ways you can obtain pretty nearly any desired amperage or voltage up to a reasonable limit.

To the man to whom a battery is a battery, and nothing more, there are a few delightful surprises in store. One of these surprises is that if he runs his current at too high a voltage through his coils he is bound to have the points of the tremblers stick and burn away, or if the voltage is greatly in excess of what he should be using he will pierce the condenser or burn out the insulation of the windings of his coils.

The average coil will run on from five to six volts, and with as low a voltage as this there is little danger of the vibrator points becoming roughened and sticky if the battery terminals are frequently reversed. Other coils may require 7 to 7½ volts, while others, again, may work on a voltage as high as 9.

Now, the average dry cell when new should register from 20 to 25 amperes, and will have a voltage of from 1¼ to 1½. If a battery composed of dry cells is connected up in straight series the amperage of the entire set will equal only that of an individual cell, but the voltage will be the sum of the entire voltage of the total number of cells.

For instance: if twelve dry cells are wired up in series, as shown in the diagram, the battery will have an amperage of 20 to 25 and a voltage of 18. Such a battery would be a very sky-rockety proposition, the high voltage which shoves the current right through the coil burning out the points, damaging windings and condenser and rapidly exhausting the amperage of the cells.

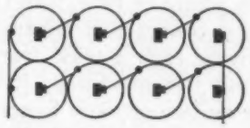
On the other hand, if the twelve cells are divided into two sets of six cells each, connected in series multiple, you will obtain the sum of the amperage of both individual sets, which will be 40 to 50, and the same voltage as if but one set were used, i. e., 9 volts.

Now, still using twelve cells, the amperage can be further increased and the voltage reduced by separating the twelve cells into three sets of four cells each, connected up in series multiple. This gives an amperage equal to the added sum of the amperage of each of the three four-cell batteries of 20 to 25 amperes, obtaining from the three sets an amperage of 60 to 75 and keeping down the voltage to as low as the voltage of one single four-cell set, which equals 6 volts.

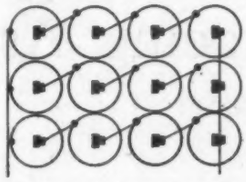
It is thus seen that with an outfit of twelve cells it is possible, by simply varying the wiring, to run from 20-25 to 60-75 amperes and from 6 to 18 volts.

The amperage of a battery is ascertained by testing with an ammeter, the voltage by testing with a voltmeter. It may be mentioned while on the subject that while testing with a voltmeter has no injurious effect on the battery,

Four dry cells in series, 6 volts, 20-25 amperes.

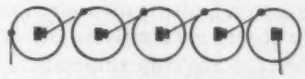


Two sets of four dry cells, connected up in multiple series, 6 volts, 40-50 amperes.

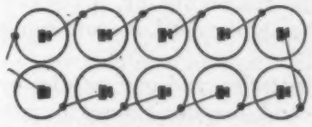


Three sets of four dry cells each, connected up in multiple series, giving 6 volts, 60-75 amperes.

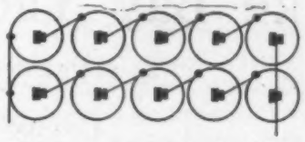
FOUR-CELL COMBINATIONS, SIX VOLTS, RANGING FROM 20-25 TO 60-75 AMPERES.



Five dry cells in series, 7½ volts, 20-25 amperes.



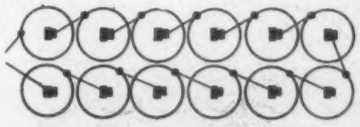
Two sets of five cells each, connected in series, 15 volts, 20-25 amperes.



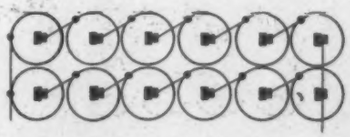
Two sets of five dry cells each, connected in multiple series, 7½ volts, 40-50 amperes.

FIVE-CELL COMBINATIONS, RANGING FROM 7½ TO 15 VOLTS, AND FROM 20-25 TO 40-50 AMPERES.

Six dry cells, connected in series, 9 volts, 20-25 amperes.



Two sets of 6 dry cells each, connected up in series, 18 volts, 20-25 amperes.



Two sets of 6 dry cells each, connected up in multiple series, 9 volts, 40-50 amperes.

SIX-CELL COMBINATIONS, RANGING FROM 9 TO 18 VOLTS, AND FROM 20-25 TO 40-50 AMPERES.

(in fact, a voltmeter may be run, if desired, on the line in circuit by the battery and the coils) an ammeter connected across the poles, on the contrary, short circuits it, and should be used but sparingly.

Always test a cell in buying it, and if it registers below 18 amperes you don't want it. When it registers below 10 amperes in your battery box it is time to put a spare set aboard.

When your battery falls down and the engine begins to miss explosions, and you find that the vibrator points on the coil are not sticking and the connections are all right, take a look at the battery. If it registers below 5 amperes the whole set may be exhausted. On the other hand, one cell alone may be practically dead, and this will pull down the entire set.

Don't make the mistake of pulling out a dead cell and replacing it with a new one, as electricity, like water, finds its own level, and the cells of low amperage will simply absorb current from the new cell until they are all on the same level as regards amperage, before you get any gain at the coil.

This is why, if you are running a six-cell set, and one cell "dies," it is better to remove that one cell and run on five, or, if you have a five-cell battery and one "dies," take out the dead one and run on four.

If you are running two sets of batteries, and one set dies out and leaves the other in pretty good condition, don't connect up the left-overs with a new battery. Run your new battery until it is down to the same amperage as the hang-overs, and when it is down to this amperage you may connect them up in series multiple.

This explains why removing a cell from a battery will often increase its efficiency, while adding a cell thereto will sometimes add no perceptible amperage.

If your coil will run on five volts use batteries of four dry cells each connected up in series multiple, and use just as many of them connected up in multiple series as you can afford to buy and as you can carry in your boat.

If you require a voltage higher than 6 to properly operate your coils, let your ignition batteries be of 5 to 6 cells each, while for the electric lighting of your sailing lights use another set of batteries of 4 cells each, connected up in series multiple. This will allow you to use 2 candle-power, 5-volt Tungsten lamps, which will draw but ¼ to ½ ampere each per hour from your battery, and as a 3-4 battery gives you an amperage from 60 to 75, you will have at least thirty hours' service for your four sailing lights.

It used to be the method to run one's engine on one battery for a certain length of time, then switch off to another battery, giving the first a chance to recuperate, and then to run alternately on each, giving each a trick from an hour to an hour and a half. While this is a good plan, it is not half as good as to run continously on two or more batteries connected up in series multiple.

The First Annual Cruise and Regatta of the Chesapeake Bay Yacht-Racing Association

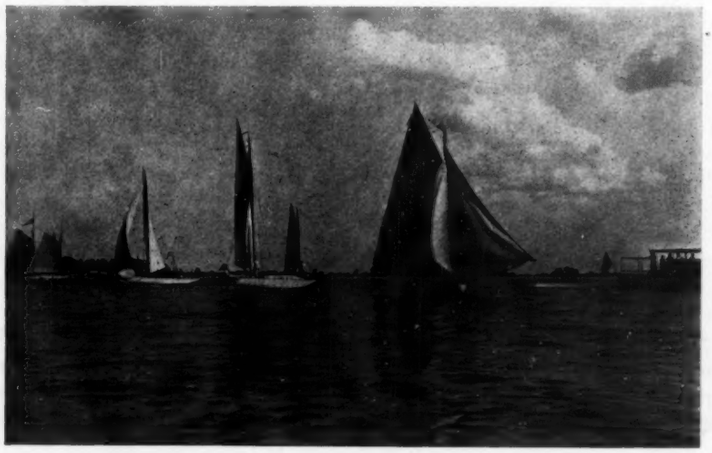
By STUART STEVENS SCOTT

Photographs by the Author

THE first annual regatta of the Chesapeake Bay Yacht Racing Association, comprised of all of the yacht and motor boat clubs of the great inland sea that stretches from Norfolk, Va., to Havre-de-Grace, Md., was held from July 16 to 23, and while the motor boat end of the racing programme did not come up to expectations, there was keen interest in the races for the sailing craft.

In summing up the trophies won, every organization but one took a prize or prizes. The Baltimore Yacht Club took nine, Corinthian Yacht Club five, Baltimore Motor Yacht Club three, Chesapeake Bay Yacht Club two, Capital Yacht Club one, and Hampton Roads Yacht Club one. The Maryland Motor Boat Club did not have a single representative in any of the races.

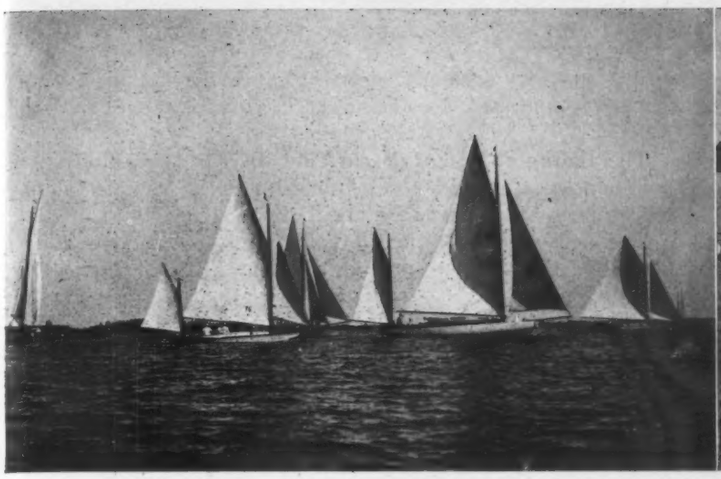
The small showing made by the Hampton Roads Club was due to the fact that only two of their fleet, the motor boat Kittrois, Commodore R. Page Waller, and the motor boat Priscilla, Mr. George Briggs, reached Oxford, the sailing contingent of about a dozen turning back after reaching Colonial Beach, the rendezvous for the Washington Club. The programme called for the Capital and Hampton Roads yachtsmen to meet at Colonial Beach on Sunday, the 17th, and sail to the Patuxent River to join the fleet from Baltimore and the eastern shore.



A CLOSE FINISH AT OXFORD, JULY 21. LEFT TO RIGHT, ZILLICOA, FREYA, EAGLET.

As happened last year the wind piped out of the northwest on Sunday and blew a gale throughout the afternoon. Only four of the Baltimore Yacht Club braved the lower bay and they were the yawl Chenoden and the sloops Eleanor, Eaglet and Black Cat. In spite of the 30-mile breeze and the high sea running the three sloops carried full sail and spinnakers. Mr. Richard E. Kaehler, of the Black Cat, was unfortunate in having on board two men who had never been on the water before. Notwithstanding, he was making a plucky fight to take the lead with his little boat. About five miles south of Sharp's Island he got into a luffing match with the Eaglet, and giving the tiller over to one of his crew, he went forward to trim his spinnaker. The man at the helm promptly permitted the spinnaker to jibe and in a moment the Black Cat capsized.

The accident was seen by the skippers of the other boats and all three at once bore down to give help. We on the Eleanor were fully a mile ahead of the Eaglet, but we stripped off the spinnaker and turned about in less time than it takes to tell. It was not until then that we appreciated how hard the wind



START OF CLASS Y IN RUN FROM OXFORD TO ANNAPOLIS.

ARJO, FLYING THE VICE-COMMODORE'S FLAG OF THE BALTIMORE Y. C.

was blowing and how high the seas were running, but we drove the little yacht for all she was worth, meanwhile watching the wreck and Dr. Fred Robertson as he drove his sloop Eaglet in the same direction. As we pounded along we could see but two figures on the upturned boat. We knew there were three on board and this sight gave us a queer feeling in the pits of our stomachs.

By the time we were abreast of the wreck the Eaglet was there and had a line made fast to it. Then, to our relief, we saw the third man, Kaehler, swimming around. Dr. Robertson and J. Tabb Robertson went overboard as soon as they made fast to the wreck, and after assisting the two men who could not swim to the Eaglet, they tried to help Mr. Kaehler.

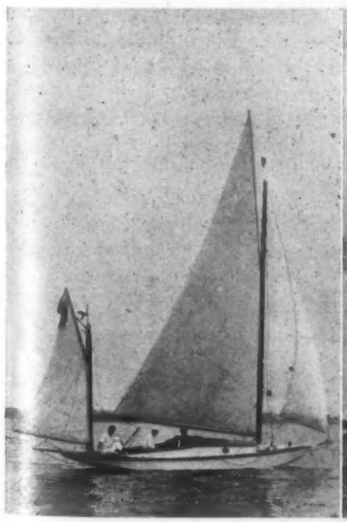
The wind was steadily increasing, the seas were capping more heavily and there was every sign of the gale getting harder, so it was determined to abandon the sloop. By this time the Chenoden arrived on the scene, and Mr. J. Austin Dinning, the owner, picked up those still in the water after the Eaglet had cast off to take in a reef. Meanwhile the Eleanor hovered around until we were assured that there was nothing for us to do. Then we turned in a double reef and scudded down the bay for Drum Point. We pulled into the anchorage at Solomon's Island about 3:30 o'clock in the afternoon, all hands wet and tired, but happy because the accident to the Black Cat had not terminated fatally.

Sunday evening, much to our surprise, the Vingt-trois and the Ojigwan, of the Chesapeake Bay Yacht Club, arrived. The little boats had had a nasty run across the bay, but the Johnson boys, who own the former, and Charles E. Henderson, who owns the latter, braved the storm for the sake of the race on Tuesday.

All day Monday the wind blew a gale, reaching 40 miles an hour at times, and we waited in vain for the arrival of the yachtsmen from down the bay. The Freelance, Mr. Garnett Y. Clark's big power boat, with Secretary J. H. Robinette on board, had left Annapolis early Sunday morning and she reached the Potomac River that afternoon to find the Norfolk and Washington men at anchor at Colonial Beach cursing the weather. It was then that the Norfolk sailors declared that they would not go up the bay.

Late Monday evening, although the wind had not abated, the Min-Mo, flying the colors of the Chesapeake Bay Yacht Club and with Commodore Francis Carroll Goldsborough on board, came into Solomon's Island. Commodore Goldsborough is the senior flag officer of the association and he called a meeting of the captains of the boats to decide what to do. The programme called for the yachts to start from Drum Point at 8 o'clock Tuesday morning and race to Oxford, and it was determined to hold to the schedule regardless of the other yachts that might, or might not, arrive in time.

Tuesday morning broke cold and grey, the wind being northeast, strong and raw. We could see that the water on the bay was broken and all hands looked forward to a nasty thresh to windward. As the fleet was made up there were but two entries



VENTURA, THE SMALLEST BOAT OF THE FLEET, WON TWO RACES.

FREYA, CAPITOL Y. C., TOOK SECOND PRIZE IN RACE TO ANNAPOLIS.

HELEN, OF THE BALTIMORE Y. C.

VINGT-TROIS IS NOW RACING ON CHESAPEAKE BAY.

ELEANOR (TO THE RIGHT) AND VINGT-TROIS JOCKEYING FOR POSITION. FREYA CUTTING BETWEEN THEM.

in Class Q, the Eleanor and the Vingt-trois, and two entries in Class T, the Eaglet and the Ojigwan. In Class Y the Chenoden was alone and she secured a sailover.

When the starting signal was given the wind in the river was light and the five boats were started at the same time. Eaglet got the better start with the others close behind, and in the run to Drum Point light Vingt-trois took the lead. Just as the yachts breasted the swell and felt the stronger air the Eleanor went through her rival's lee and took the lead. At the same time the Ojigwan passed the Eaglet and then began the real work of the day.

From Drum Point to Sharp's Island Eleanor maintained a lead of about three-quarters of a mile over Vingt-trois, while Ojigwan was about three miles ahead of her competitor. Off the island the wind commenced to drop and finally it petered out entirely. For more than an hour the calm lasted and then came catspaws from first one direction and then another. The Vingt-trois seemed to have the better luck, for she caught a few flaws that brought her up to the Eleanor and side by side the two yachts drifted up the river on the tide.

Meanwhile the crews of both yachts were working like mad, trying to woo the vagrant breezes with light sails, shifting and changing them every few minutes. First we would be close hauled and then we would have our spinnakers out. Then we would have our ballooners and reaching jibs up, one after the other, in such rapid succession that all hands began to get dizzy.

At last the wind settled down and came true out of the northeast and both yachts hauled close for the beat to the finish, 14 miles away. For 10 miles, after a series of tacks, the yachts were about even, but Eleanor caught a slant that gave her a lead as she rounded the Choptank light, and the ballooner was set for the reach to the finish. The Vingt-trois was right behind, however, and Eleanor's victory was but a narrow one—one minute and thirty-five seconds. The summary is:

Class Q.	Start.	Finish.
Eleanor	8.00	6.16.55
Vingt-trois	8.00	6.18.30

The Ojigwan's victory was most complete as she beat her rival by more than an hour.

Wednesday was "the" day, and for the occasion a number of sail and power boats of the clubs up the bay that had been delayed by the weather began to arrive. Among the early ones was Commodore Waller, and during the morning some of the fleet of the Capital Yacht Club came in, Commodore Ralph M. Gault's power boat Dakota towing Mr. A. O. Portner's Iona, which developed engine troubles. In the sailing fleet, however, were the yawls Freya, Nenemoosha and Grace K. The steam yacht Gaivota and the power boat Amackssin made up the fleet. Among the belated arrivals of the Corinthian Yacht Club were the yawl Ventura and the sloop Zillicoa, while their fleet of power craft were represented by Dr. A. D. Mansfield's Venezia.

The Maryland Motor Boat Club was represented by President W. P. Bigelow on the Ethel B., Vice-Commodore W. W. Varney on his auxiliary schooner Signal, Howard Bryant on his launch Tuckahoe and Mr. Frederick T. Dorton on his cabin cruiser Belvoir.

The Baltimore Motor Yacht Club fleet comprised the power boat Nuska, Commodore Carlton Slagle, the launch Sally, and the cruisers Who, Suwanee and Dif.

The fleet of the Baltimore Yacht Club was increased by the arrival of the Freelance, the motor boat Virginia, Vice-Commodore Arthur Foster's power boat Arjo, the auxiliary yawl Wye and the auxiliary schooner Leona. The fleet of the Chesapeake Bay Club was out in full force and they certainly had their flag higher than anyone else, for it flew from the top of the big steel schooner Ariadne, owned by Mr. James Laughlin, Jr., of Pittsburg.

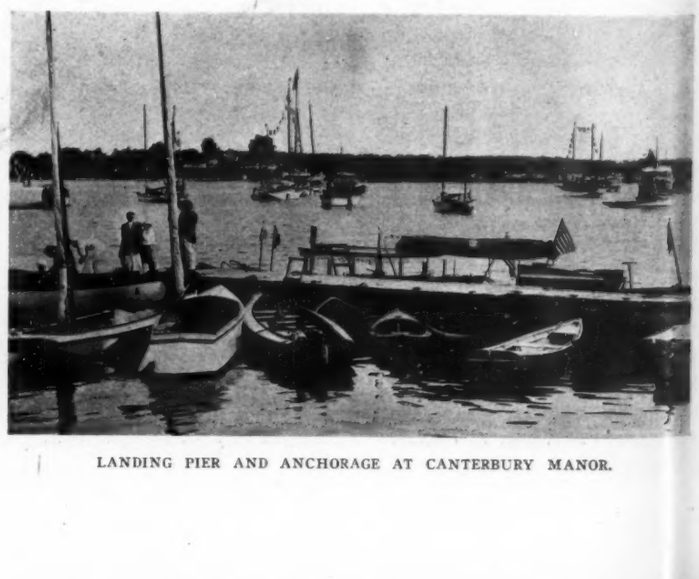
At 3 o'clock in the afternoon the entire fleet, the motor boats towing the sailing craft, got under way and proceeded to Canterbury Manor, the home of Commodore Goldsborough on Trippe Creek, where a reception was held. Although not so old a place as Radcliffe Manor, where the reception was held last year, Canterbury Manor is one of the show places of the eastern shore. It is delightfully situated, and with gallant men and pretty women, there was nothing lacking to make the afternoon most enjoyable. It was sundown before the yachtsmen returned to their anchorages, all hands were pretty well tired out.

Thursday morning the racing contingent was awake and doing by daybreak for there was much work to be done. Light sails had to be stopped, rigging overhauled and a hundred and one things attended to. The course was 16½ miles in the Choptank River and the start was made at 10:25 when the T Class was sent over the line. In this class Zillicoa was alone, getting a sailover. In the Q Class, that followed, were Eleanor and Vingt-trois; in the T Class were the sloops Eaglet and Naomi. In the Y Class were the yawls Ventura, Freya, Chenoden, Nenemoosha and Grace K.

Interest centered in the Q Class. In the spring the Johnson boys, after sailing the Ojigwan to victory last year, anticipated cleaning up the bay with their new boat Vingt-trois, but Commodore I. E. Emerson, of the Baltimore Yacht Club, purchased Eleanor and gave her to Dr. Williams to race against Vingt-trois. Hence everyone was anxious to see how the pair would measure up in the final struggle.

The wind was light and ahead as the pair crossed the line with Eleanor 10 seconds in the lead, but before the first mark was reached the Vingt-trois caught a favoring slant that put her to windward and ahead. At the second mark, after a close reach, the Vingt-trois rounded four seconds ahead. Then both yachts were squared away for the Choptank light, but the following wind was fitful and shifty. At one time Eleanor carried the

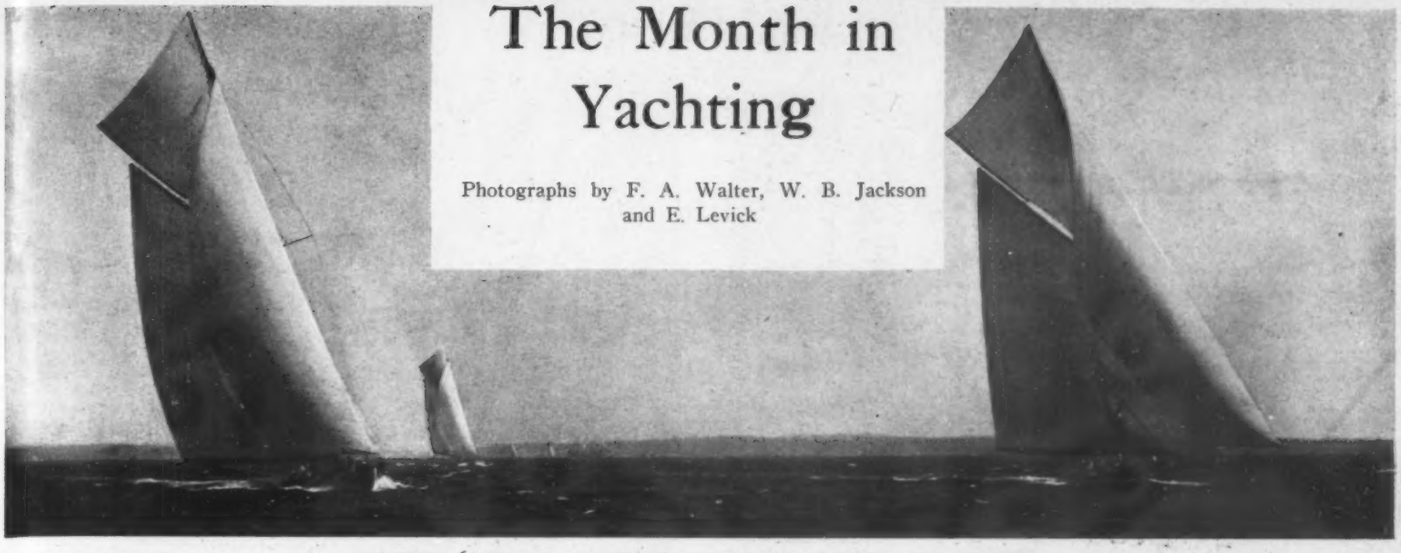
(Continued on page 244)



LANDING PIER AND ANCHORAGE AT CANTERBURY MANOR.

The Month in Yachting

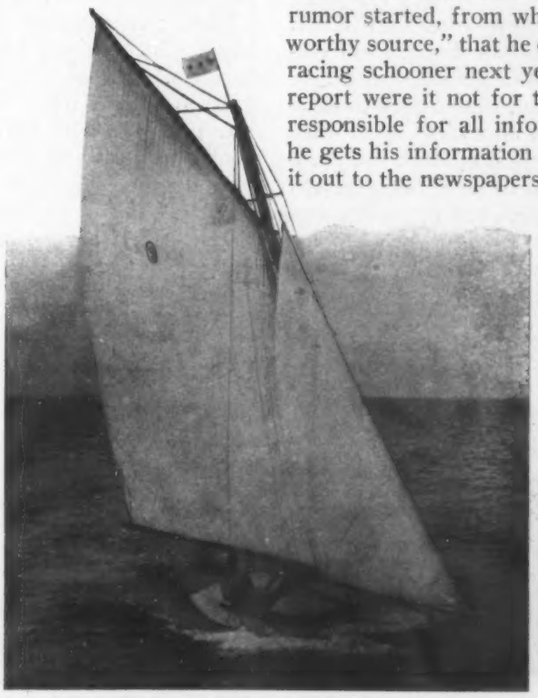
Photographs by F. A. Walter, W. B. Jackson and E. Levick



THE THREE 65-FOOTERS IN A FRESH BREEZE DURING LARCHMONT RACE WEEK.

THAT the small boats entered in the Jackson Park Yacht Club's regatta on July 30 should have come so creditably through the furious northeaster which lashed Lake Michigan on that day must be a source of pride to all who have the interest of the South Side organization at heart. For that matter, such emotion need not be confined to this club. It speaks well for the spirit as well as the seamanship of the men at the sticks of these twenty-five, twenty-one and twenty-foot sloops, which, with one or two reefs in their mainsails, put out to the starting line undaunted and took what the elements had to give. Jackson Park and Susan II, twenty-five foot cabin yachts, started out on what promised to be a rattling contest, but Susan carried away a shroud and did not finish. Jackson Park, however, negotiated the course in fine style. In the twenty-foot class Wenonah sailed a beautiful race against Rascal and Rebel II. Wenonah led Rascal over the finish line by five minutes and Rebel II followed five minutes after the second boat. Soon after the start Cyma was reported missing, and for a time there were grave fears that the big gray waves had swallowed her. But these fears did not take into account the seaman-like ability of those aboard her. Blown out of her course by the high winds, she headed for South Chicago, and made that port safely and without damage. Lake Michigan in a northeaster is no pleasant place for sailing, and those of the East who have been caught on Long Island Sound in a blow from that quarter can, if they will magnify the venom of the short, snarling waves tenfold, gain some idea of what the Jackson Park windjammers went through.

The yacht racing spirit is keen on Lake Michigan this year, as evidence of which note the $1,000 cup offered by Edmund Meyer, of the Columbia Yacht Club, as a prize to be raced for by all boats from eighteen feet up which are sufficiently seaworthy to enter a two days' cruising race across Lake Michigan and return. The cup is to be held one year by the winning boat and the race is to be an annual event. The contest this season is set for Sept. 17, and there should be a fine entry list. A course laid across from Chicago and back again can be covered in two days, if whole-sail winds blow both days; it is about 85 miles across the lake from this port.

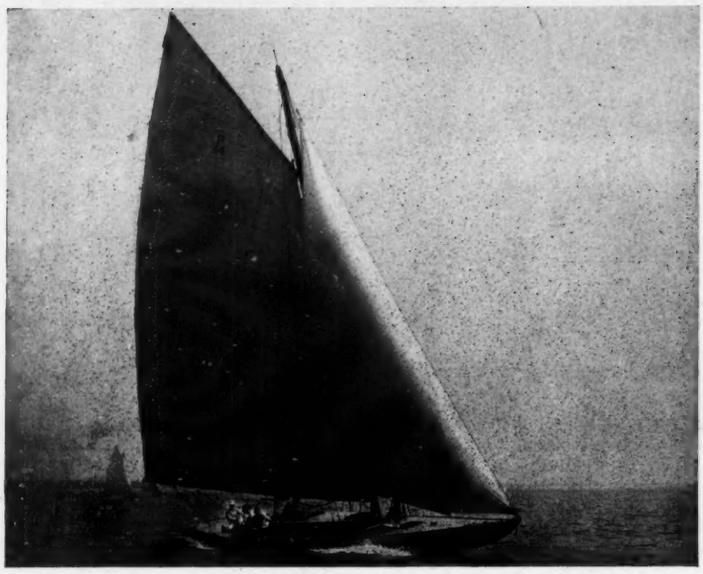


20-FOOTER WENONAH, OF THE JACKSON PARK YACHT CLUB.

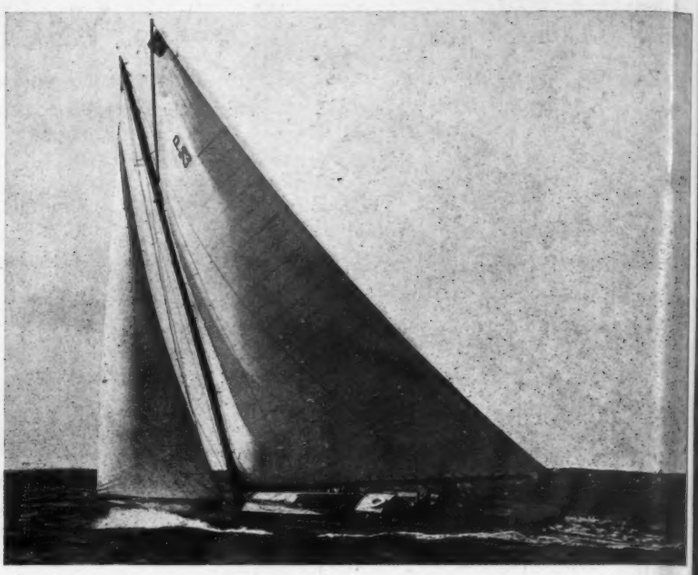
They have a game and sportsmanlike crowd of racing men in the Eastern Yacht Club. On their July cruise the boats raced to various islands and harbors along the grim Maine coast, ever ready for a fight or a frolic, both of which, it might be said, they got. There were no boats of the Elmina or Queen or Istalena or Winsome calibre, but a lot of good out-and-out sloops and schooners which could play give-and-take with the elements day in and day out. There was the big Savarona, owned by G. Howard Clark, and the Emerald, F. Lewis Clark, as well as smaller schooners, including Taormina, Willis Eaton; Irolita, E. Walter Clark; Venona, winner of the 1908 Bermuda race, E. J. Bliss; Iris, F. M. Whitehouse, and Henry A. Morss's Vision. In the sloop classes there were C. C. Rumrill's Adventuress, which appeared to have lost nothing of last year's speed; the good old Humma, which made her sail every minute, and Doris and Cacique. Dorello brought up the tail end of the class with her rival the thirty-five footer Edjako II.

Ex-Commodore Morton F. Plant, of the New York Yacht Club, was at Bristol about two weeks ago, and although ostensibly his visit was to look over the new speed launch building for him, a rumor started, from what was reported from Bristol as a "trustworthy source," that he discussed with Herreshoff plans for a new racing schooner next year. I should be inclined to laugh at this report were it not for the fact that my old friend Farrington is responsible for all information that leaks out at Bristol. When he gets his information and is sufficiently satisfied with it to send it out to the newspapers, it may usually be reckoned that he is not far wrong. Westward will be racing in American waters next year in all probability, and any man looking for sport, as Commodore Plant undoubtedly is, could find it in plenty with a ninety-foot racing schooner.

As to glory, I received a short and sweet letter the other day from a man interested in the racing of the Vanderbilt sloop Aurora, which boat was mentioned in this department as being sailed always and solely by Corinthians. The letter was apropos of a paragraph as to professional sailing masters aboard Istalena and Winsome. "Give the other fellows credit," said this letter, "Pynchon and Lippitt sail their own boats, always." So hereby I give the requested credit. One day, in the course of Larchmont



CARA MIA TOOK THE SERIES FOR THE MANHASSET BAY CUP BY THE NARROW MARGIN OF ONE POINT.



MAVOURNEEN, THE BOSTON BOAT THAT CAME AROUND THE CAPE TO TRY FOR THE MANHASSET CUP.

Race Week, after the race was finished, Mr. H. F. Lippitt came up to the crew of Irondequoit, seated on the veranda of the club, and asked if any of the Gardenia's crew were about. "Chick" Perrin had sailed this sloop that day.

"Well, if you see any of them," said Mr. Lippitt, "tell them I want to apologize if I crowded the sloop off Huntington. I did not know what she was going to do when we were coming together over there and I fear we made her lose ground."

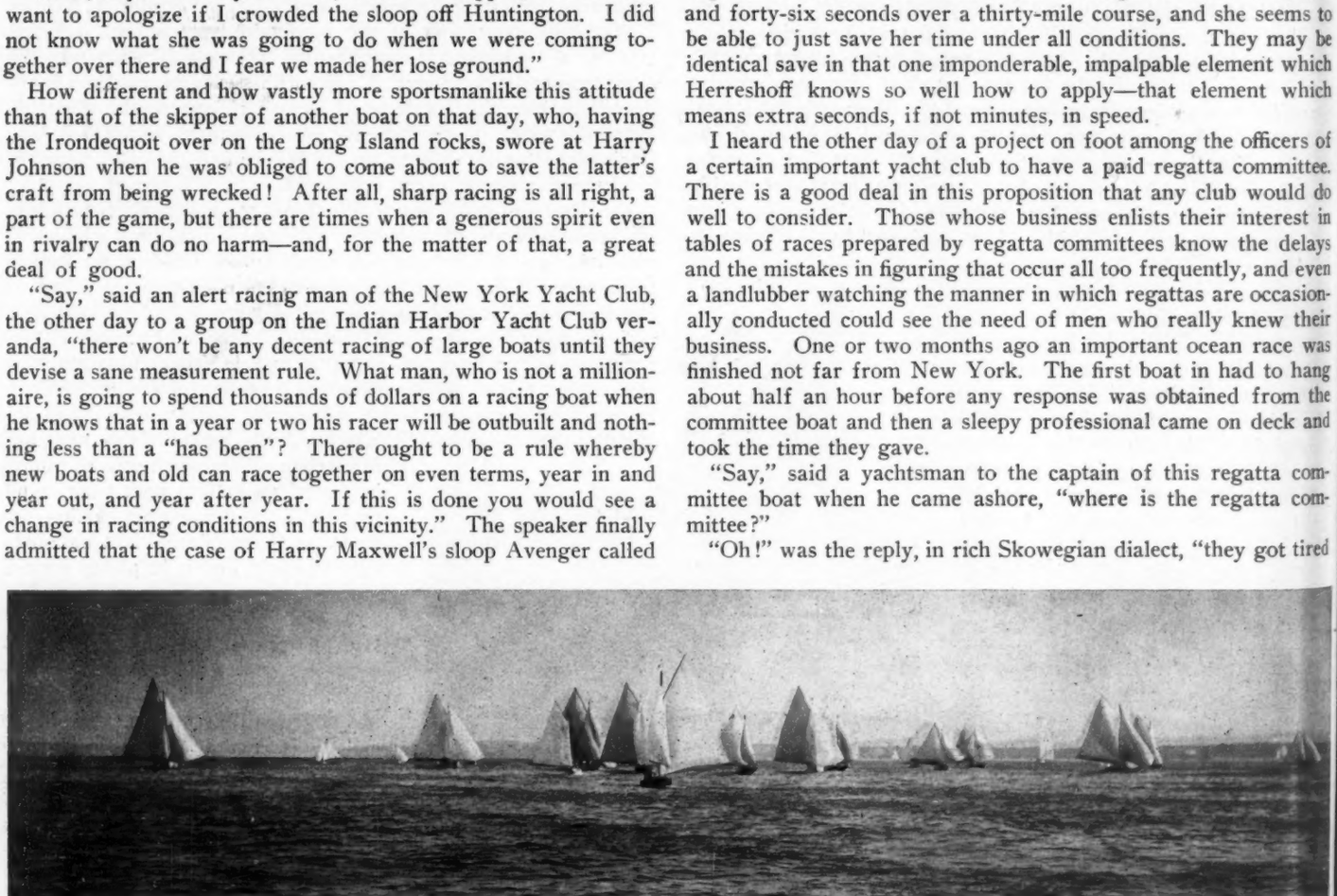
How different and how vastly more sportsmanlike this attitude than that of the skipper of another boat on that day, who, having the Irondequoit over on the Long Island rocks, swore at Harry Johnson when he was obliged to come about to save the latter's craft from being wrecked! After all, sharp racing is all right, a part of the game, but there are times when a generous spirit even in rivalry can do no harm—and, for the matter of that, a great deal of good.

"Say," said an alert racing man of the New York Yacht Club, the other day to a group on the Indian Harbor Yacht Club veranda, "there won't be any decent racing of large boats until they devise a sane measurement rule. What man, who is not a millionaire, is going to spend thousands of dollars on a racing boat when he knows that in a year or two his racer will be outbuilt and nothing less than a "has been"? There ought to be a rule whereby new boats and old can race together on even terms, year in and year out, and year after year. If this is done you would see a change in racing conditions in this vicinity." The speaker finally admitted that the case of Harry Maxwell's sloop Avenger called the subject to his mind. Avenger is not an old sloop and yet she cannot meet the new Plant forty-six-footer on conditions that give her an even chance of victory. Herreshoff has stated that both Avenger and Shimna are identical. They may be, but yachting experts doubt this. Shimna allows Avenger about one minute and forty-six seconds over a thirty-mile course, and she seems to be able to just save her time under all conditions. They may be identical save in that one imponderable, impalpable element which Herreshoff knows so well how to apply—that element which means extra seconds, if not minutes, in speed.

I heard the other day of a project on foot among the officers of a certain important yacht club to have a paid regatta committee. There is a good deal in this proposition that any club would do well to consider. Those whose business enlists their interest in tables of races prepared by regatta committees know the delays and the mistakes in figuring that occur all too frequently, and even a landlubber watching the manner in which regattas are occasionally conducted could see the need of men who really knew their business. One or two months ago an important ocean race was finished not far from New York. The first boat in had to hang about half an hour before any response was obtained from the committee boat and then a sleepy professional came on deck and took the time they gave.

"Say," said a yachtsman to the captain of this regatta committee boat when he came ashore, "where is the regatta committee?"

"Oh!" was the reply, in rich Skowegian dialect, "they got tired



HANDICAP CLASS YACHTS COMING TO THE FINISH LINE AT LARCHMONT.

THE NEW YORK "THIRTIES" AT LARCHMONT.

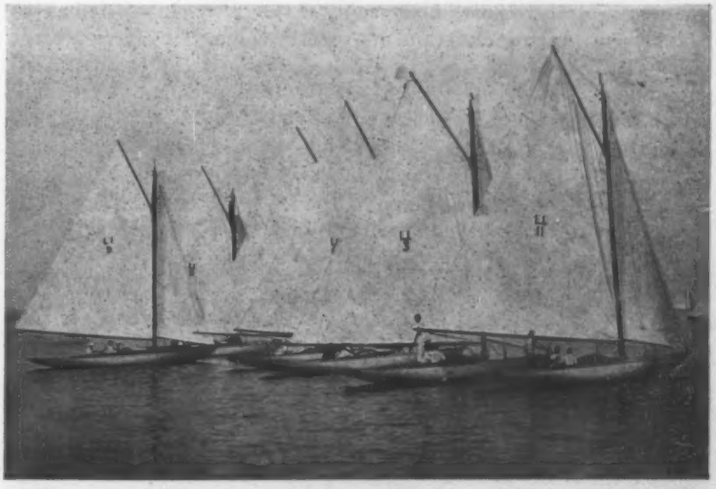
about five o'clock last night and went ashore. They told me to get the times." Such an incident speaks for itself.

Does changing the name of a yacht bring luck? Some superstitious windjammers think so. At all events it changed Naulahka's fortunes. Unlike a certain much-vaunted pugilist, this sloop under the new name, Cara Mia, flying the signal of Stuyvesant, could come back. Beaten last year in the contest for the classic Manhasset Bay Challenge Cup by William Gardner's product, the thirty-one rater Windward, Naulahka (or Cara Mia, as the new name reads on her stern) came forth in this year's series for the cup and trimmed the Gardner creation, and the new Boston boat, Mavourneen, from the board of George Owen. As Cara Mia represented the American Yacht Club, the trophy goes back there from Indian Harbor, to repose on the pedestal where that sterling yachtsman, the late Trenor L. Park, of Mimosa I and Mimosa II, placed it. Last year, when Windward, under the skilled ministrations of Addison Hanan, defeated Naulahka, Stuyvesant Wainwright, who held the stick of the Herreshoff sloop, was not convinced that the relative merits of the two yachts had been thoroughly tried out. This contention was scouted by the experts, but Mr. Wainwright appears to have known whereof he spoke. For that matter, the series last year did not afford a good test, as light winds prevailed upon the two races of the series. In the series this year, again marred by poor winds, Cara Mia made ten points, Mavourneen nine, and Windward eight, which is close sailing.

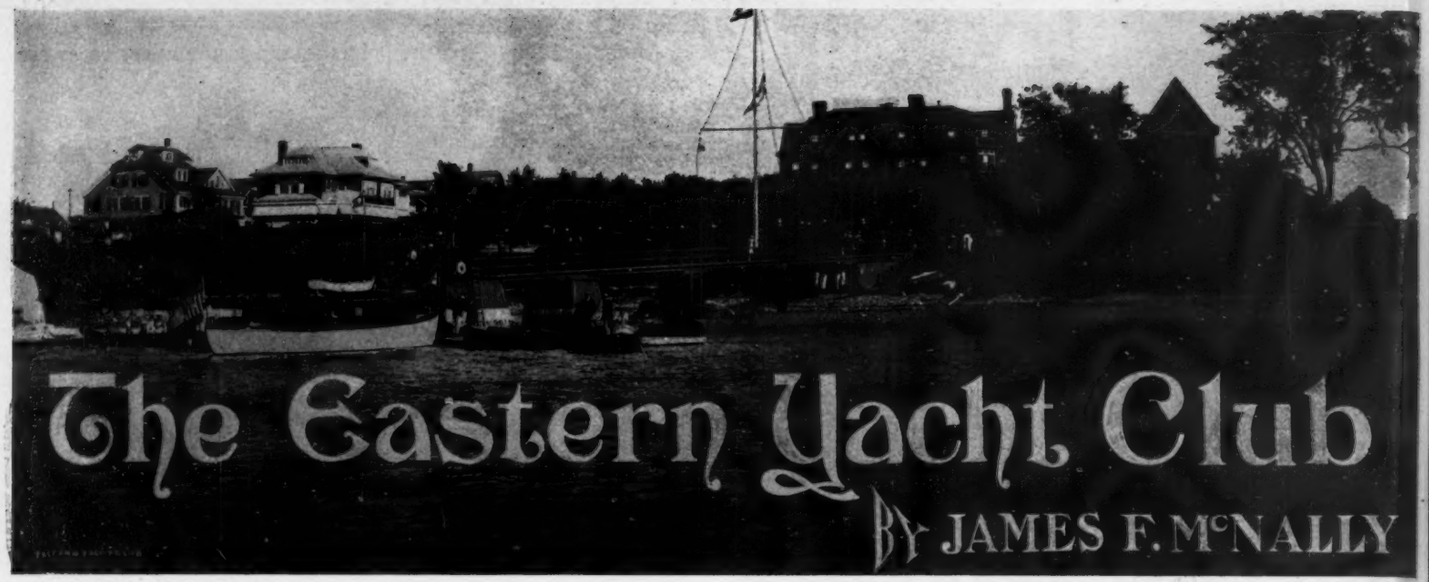
Larchmont Race Week passed, as usual, with a great deal of fine racing weather, which nearly a hundred yachts took advantage of every day. Aurora triumphed in the big sloop classes, winning races on four days, with one each falling to Winsome and Istalena. Shimna defeated Avenger consistently and Irondequoit took honors in Class M. On three of the race days there were breezes ranging from ten to twenty knots, a record which seems peculiar to Larchmont.

In the six regattas sailed during race week, the total number of starters was 583, in twenty-nine classes, and 159 races were sailed in the six days. There were actually 124 yachts competing. The records in each class and the points scored in the series races are as follows:

	Starts.	Firsts.	Seconds.	Thirds.	Points.
Schooners.					
Dervish, Robert Toland	2	2	0	0	..
Simitar, P. H. Johnson	3	2	1	0	..
Miladi, George Scott	4	0	2	1	..
Cygnet, F. F. Carey	1	0	0	1	..
Sloops—Class K—65-ft. Rating.					
Aurora, C. Vanderbilt	6	4	1	1	15
Istalena, G. M. Pynchon	6	1	4	1	12
Winsome, H. F. Lippitt	6	1	1	4	9
Sloops—Class L—55-ft. Rating.					
Shimna, M. F. Plant	6	6	0	0	12
Avenger, H. L. Maxwell	6	0	6	0	6
Sloops—Class M—46-ft. Rating.					
Irondequoit, H G. S. Noble	6	3	3	0	18
Eleanora, Lawrence Darr	6	2	1	1	15
Gardenia, L. S. Herzig	5	0	2	3	12
Polaris, L. R. Alberger	5	1	0	2	10
New York Y. C. 30-footers.					
Nepsi, Johnston de Forest	6	2	2	1	40½
Alera, J. W. Alker	6	2	1	0	30
Paryne, J. P. Morgan, Jr.	6	0	1	1	29½
Nautilus, E. E. Dickinson, Jr.	6	0	1	1	28
Caprice, Ralph N. Ellis	6	0	0	1	27
Dahinda, G. E. Roosevelt	6	1	0	0	21
Rowdy, H. S. Duell	6	0	1	0	21
Carmelita, F. T. Catlin	6	0	0	0	10
Ibis, H. W. Maxwell	1	0	0	0	6
Sloops—Class P—31-ft. Rating.					
Cara Mia, S. Wainwright	5	5	0	0	15
Windward, R. A. Monks	5	0	5	0	10
Mimosa III., Edmund Reekes	3	0	0	3	3
Mashnee, W. S. Pardee	1	0	0	0	1
Sloops—Buzzard's Bay 30-footers.					
Mashnee, W. S. Pardee	3	1	0	0	..
Wa Wa, W. Lawton	2	0	0	0	..
Dutchess, J. B. Palmer	1	0	0	0	..
Notos, G. K. Benson	1	0	0	0	..
Sloops—Class O—25-ft. Rating.					
Gray Jacket, F. S. Noble	5	4	1	0	14
More Joy, W. H. Childs	5	1	4	0	12
Keewaydin, F. D. Trapp	3	0	0	2	2
Larchmont 21-footers.					
Houri, D. E. Dealey	6	3	3	0	9
Iola, H. H. Duden	5	3	2	0	8
American Y. C. Raceabouts.					
Cliphora, C. D. Mallory	6	3	3	0	..
Rascal, J. J. Dwyer	5	3	1	1	..
Maryola, A. F. Bradley	3	0	1	2	..
Howdy, George Mercer, Jr.	1	0	1	0	..
Raceabouts.					
Typee, W. S. Runk	5	3	1	1	..
Rascal III., S. C. Hopkins	5	2	3	0	..
Chinook, Lambden & Morse	6	2	0	4	..
Handicap Class—First Division.					
Sally IX., A. E. Black	6	4	0	0	30
Crescent, A. G. Hill	6	1	2	2	25
Essex, P. V. Giffen	6	0	2	2	22
Interim, R. N. Bavier	6	1	0	2	19
Juanita, S. C. Hunter	6	0	2	0	17
Wanderer IV., R. B. Budd	2	0	0	0	7
Handicap Class—Second Division.					
Quest, F. L. Vulte	6	3	1	0	40
Fearless, R. B. Stoddard	6	1	2	1	39
Red Wing, Lowey & Grace	6	0	2	4	38
Scud, G. P. Granbery	6	1	1	1	35
Mist, J. A. Morris	4	0	0	0	18
Waialua, H. L. Stone	1	1	0	0	8
Bedouin, W. J. Fowler	2	0	0	0	4
Dixie, M. W. Houck	1	0	0	0	4
Handicap Class—Third Division.					
Robin Hood II., G.E.Gartland	2	2	0	0	4
Howto II., J. McCarthy	3	2	0	0	4
Handicap Class—Fourth Division.					
Ramea, P. L. Howard	6	3	2	1	32
Kenosha I., W. R. Berth	6	1	3	0	27
Okee II., J. H. Mahlstedt	6	1	1	3	26
Grace II., J. F. Lambden	6	1	0	3	20
Sybilla, F. B. Schock	2	0	0	1	9
Kenosha II., C. W. Voltz	1	0	0	0	1
Handicap Class—Fifth Division.					
Miss Modesty, H. A. Swart	6	4	2	0	10
Nimbus III., J. F. Schwartz	6	2	4	0	8
Sonder Class.					
Joyette, W. W. Swann	6	6	0	0	..
Tomboy III., D. Y. Pendas	6	0	6	0	..
Larchmont Interclub Class.					
Festina, A. B. Alley	6	3	0	0	46
Lewanna, Spence Bros	6	2	2	0	46
Yukan, N. D. Weir	6	0	1	2	38
Salas, M. B. Pendas	6	1	0	1	35
Hamburg II., M.Goldschmidt	6	0	0	0	33
Dagmar, P. J. Tierney	6	0	0	0	32
Como, I. R. Edmands	6	0	1	1	30
Wild Thyme, A. H. Morris	6	0	1	0	29
Babbette, R. P. Clarke	5	0	0	1	17
Triton, Lawrence Darr	4	0	1	1	15
Manhasset Bay Knockabouts.					
Chichioker, F. T. Cornell	5	3	2	0	..
Pizey, L. F. Eggers	5	2	1	2	..
Ahoy, Otto Peters	5	1	2	1	..
Imp, G. G. Goodman	3	0	0	1	..
Manhasset Bay Knockabouts—Special.					
Avis, Hugo Gerber	6	5	1	0	..
Arizona, G. W. Kear	5	1	2	0	..
Edith, G. S. Kelly	3	0	0	1	..
Sloops—Class R—20-ft. Rating.					
Ogeemah, A. B Clemens	6	5	1	0	29
Wacoutah, M. D. Truesdale	6	1	3	0	21
Hamburg, W. H. Voth	6	0	0	5	17
Virginia, C. Shields	6	0	1	1	14
Hoyden, B. Litchfield	1	0	1	0	4
Manhasset Bay 20-ft. Class.					
Ardette, Clarkson Cowl	6	4	1	0	26
Scylla, E. A. Sierck	6	1	2	3	22
Mahaska, David Duncan	6	0	3	2	18
Kit, J. F. O'Rourke	6	1	0	0	14
Althea, E. P. Alker	4	0	0	1	7
Glen Cove One-Design Class.					
Opal, J. P. Morgan, Jr.	6	4	0	2	25½
Jade, E. S. Willard	6	2	1	1	20½
Turquoise, J. S. Morgan, Jr.	6	1	1	2	21
Catseye, J. F. Adams	6	0	3	2	19
Amethyst, W. Hine	2	0	0	0	1
Stamford One-Design Class.					
Dart, H. H. Gillespie	6	2	2	2	12
Fiddler, J. S. Jenkins	6	1	3	2	11
Scaup, R. W. J. Kingam	4	3	1	0	11
Sloops—Class S—18-ft. Rating.					
Bensonhurst, F. P. Currier	5	2	2	0	..
Drena, S. Shethar	2	1	0	1	..
Spray, Ross Brown	1	1	0	0	..
Nereid, J. H. Shethar	6	0	4	0	..
Midge, Dr. C. T. Adams	4	0	0	1	..
Alpha, F. K. Ruprecht	1	0	0	1	..
Osprey	2	0	0	0	..
New Rochelle One-Design Class.					
Nereid, George Fuller	6	3	3	0	..
La Rochelle, F. H. Waldorf	6	2	2	2	..
Virginia, Boyd Decker	3	1	1	1	..
Echo, J. Bacon	1	0	0	0	..
Bug Class.					
Iney, C. C. Converse	6	2	4	0	..
Big Bug, George A. Corry	6	2	0	1	..
Skeeter, J. S. Maher	3	1	0	0	..
Dragon Fly, Donald Cowl	6	1	0	3	..
Rose Bug, W. S. McIntosh	5	0	2	1	..
Mayfly, A. B. Fry	5	0	0	1	..
Dories.					
Faraway, S. B. Fry	6	3	2	1	..
Tautog, G. G. Fry	6	3	1	1	..
El Cupido, L. Torrance	6	0	1	2	..
Alice, A. K. Griffen	2	0	1	0	..



THE NEW LARCHMONT INTER-CLUB, ONE-DESIGN BOATS ARE FURNISHING KEEN RACING.



The Eastern Yacht Club

BY JAMES F. McNALLY

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THE EASTERN YACHT CLUB ON MARBLEHEAD NECK FROM THE WATER.

THE title of Premier Yacht Club of New England unquestionably belongs to the Eastern Yacht Club, of Marblehead, an organization which holds a place in American yachting second only to that of the New York Yacht Club. During its long career in the yachting field it has done much to further the interest of the sport, and during the last five years in particular it has done much to bring about a resumption of international racing, especially with small boats. Many of its members are also members of the New York Yacht Club, so that these two great yachting organizations have been closely allied for years, and this fact alone has given the Eastern Yacht Club a prestige not enjoyed by any other club in New England. It has done its full share in making yachting history in this country, and it can claim equal honors with the New York Yacht Club in the defense of the America's cup.

The yachtsmen of New England owe a debt of gratitude to the Eastern Yacht Club and to many of its older individual members for the unselfish and generous manner in which they have given their time and money to build up new classes, to encourage designers and builders and to foster the sport in general.

Composed of wealthy men, it could, and did, encourage the sport as no other organization of a quarter of a century ago in New England could have done, for while it did not formerly recognize boats under 30 feet waterline, it developed the larger classes and left the small boat racing to the other clubs. It has always been a racing club, and its regatta committees have always been liberally provided with funds from the general exchequer to maintain and further the interest of the sport, even outside its own special interests and its own boats.

Marblehead as a racing ground is second only to Sandy Hook and Long Island Sound in yachting history, although Newport in recent years has claimed much of the glory so far as large boats are concerned, and when one mentions Marblehead and yachting, the name of the Eastern Yacht Club is indissolubly associated with them.

From the mere handful of members which formed the club in 1870 it has grown to an active membership of nearly 700. Of the original band of enthusiastic amateur sailors who organized it there are but two left—Mr. T. Dennie Boardman and Mr. A. C. Wheelwright. These men, who stand to-day as No. 1 and No. 2 in the club book, were elected on March 31, 1870. The rest have crossed the bar.

The early history of the club is known to but few of the old members. The writer is indebted to Mr. Henry B. Jackson, who stands No. 6 in the list of members in the club, and who was elected on March 4, 1871, for some of the facts concerning its early history here recorded. Mr. Jackson was secretary of the club from 1874 to 1881. Mr. Sidney W. Burgess, a brother of the late designer, Edward Burgess, who was secretary in 1882-1883, and who is one of the best posted men in matters pertaining to yachting in this country, also supplied some interesting information regarding events leading up to the formation and organization of the club.

There were very few large yachts owned in Massachusetts prior to 1870, and these few were sailed by Boston men who had residences along what is now the fashionable north shore—at Beverly, Manchester and Swampscott. These craft, which were mostly of the "rule-of-thumb" order, varied in length from 45 to 75 feet, and were used mostly for cruising. However, when the owners went out for a spin they would meet in friendly "brushes" and "scraps," the results of which were usually in doubt, as they were not sailed over measured courses, and many a hot argument as to the merits of the respective vessels would take place.

Among the famous yachts of those days were the sloop Narragansett, owned by Gordon Dexter; the schooner Wivern, owned and sailed by T. Dennie Boardman; John Cushing's sloop Effie; Greeley W. Curtis' Dream; John Heard's Rebecca; Henry S. Hovey's schooner Edith, and afterwards his Fortuna; the schooner Juliet, owned by John Jeffries; the schooner Julia, built by Henry Steers, a nephew of the designer of the America, and owned by the Whitney boys, Stanton, Charlie and Ned, the latter then a mere boy, but afterwards a clever yachtsman; Frank Burgess' sloop Annie, designed by "Bob" Fish, and his sloop Sadie, designed by Herreshoff; R. D. Tucker's sloop Pilgrim, built by Harrington, of Bath, Me.; the sloop Coming, built by "Bob" Fish, of Staten Island, and the sloop Lily, owned by Caleb W. Loring.

These, and other old timers which have long since rotted away, comprised the early racing fleet in Massachusetts waters. These boats raced it out whenever they met, but it was several years before a real organization was effected.

It was yachting, however, of the real sort, and a foot or two difference in length, or a little extra canvas, did not count, for rules and restrictions did not bother the amateur tars in those days. One set of sails would do for several seasons, and the expenses which came in after years would have astounded those skippers and owners if suggested at that time.

An organization known as the "Eastern Sailing Association" held races for a time prior to the formation of the Eastern Yacht Club in 1870. The members had no clubhouse, but would hold meetings, generally at the Parker House in Boston, and arrange the details for the races.

LIBRARY OF THE EASTERN YACHT CLUB.

The first officers of the Eastern Yacht Club were: Commodore, John Heard; vice-commodore, Franklin Burgess; secretary, John Jeffries, Jr.; treasurer, Joseph P. Gardner; measurer, George Z. Silsbee.

On the regatta committee were R. B. Forbes, David Sears, Jr., M. M. Whitney, W. G. Saltonstall and S. E. Peabody.

The present clubhouse was erected about ten years after the formation of the club, and the original building, which has been enlarged from time to time, stood upon the present site on Marblehead Neck.

The first regatta of the Eastern Yacht Club was held on July 13, 1870, and was a great social event. The club offered $150 as a prize for the winning schooner and $100 to the winning sloop. The course was from Marblehead Rock to Halfway Rock, leaving it to starboard, thence to the buoy off Davis Ledge, off Minot's Light, to the bell buoy off the Graves, to finish line. Distance, 40 miles.

The members of the club and their friends left India Wharf, Boston, on the steamer George Shattuck, and followed the racers over the course. Collector Russell, of the Port of Boston, was also out with the revenue cutter Hamlin, and the little steamer Grace Irving came out from Salem with a party. The race was a great success, and the future of the new yachting organization was assured.

Races were held weekly during the yachting season between the boats of the fleet, and yachting enthusiasm was high.

The racing between Frank Burgess' Sadie, designed by Hereshoff, and R. D. Tucker's sloop Coming, built by "Bob" Fish, was always exciting. The Sadie could hold the Coming on the wind but, running, the latter would get the better of the argument being longer.

Even compared with the New York Yacht Club, the Eastern already had an excellent fleet of boats, although a much younger organization. In its second year, 1871, a splendid regatta was held, in which the New York Yacht Club squadron participated, and the greatest interest was manifested. There were two handsome cups for schooners and sloops, the Eastern Yacht Club cup and the Swampscott Cup, in each class. The course was from a stake boat off Phillip's Point to Davis Ledge, Halfway Rock, Pig Stakes, and home. Distance, 34⅜ nautical miles. There was a fine fleet of boats in the race, which was watched with the keenest of interest by crowds on shore at various points of vantage, while a big fleet of craft hovered about the starting and finishing lines. The schooner Columbia won the cups in her class, with Dauntless second, Sappho third, Wanderer fourth, and Ianthe fifth. Gracie captured the cup for the sloops with Vixen second and Sadie third.

After the race, the Eastern Yacht Club gave a dinner to the members of the visiting squadron at Taft's famous tavern, on Point Shirley, which in those days had the reputation of serving the finest fish and game dinners in this country, and many a jolly yachting party navigated the "Gut" to visit Taft's.

This regatta of the Eastern Yacht Club became an annual fixture and the great event of the club, and the New York fleet made many trips around Cape Cod to Marblehead to visit the Eastern Club. The friendship between the organizations grew as the years passed, and the visit of the New York squadron to Marblehead is even yet a great event which is most keenly anticipated.

MODEL ROOM OF THE EASTERN YACHT CLUB.

With the building of a commodious clubhouse at Marblehead Neck, the club was in a position to entertain, and it leaped into popularity at a bound. Its fleet increased and it became a most powerful yachting organization, and its racing boats were known all over the Coast. To recount the victory of Eastern boats, or to go into an extended analysis of the part the members of the club have played, would be to write practically the history of American yachting, so closely allied has the Eastern Yacht Club been with its important incidents, events and progress.

THE COOL AND SPACIOUS DINING ROOM.

MARBLEHEAD HARBOR LOOKING TOWARDS THE EASTERN YACHT CLUB FLOAT.

Its 30, 40 and 46-foot classes were famous, while the part it played in 1885, 1886 and 1887 with Puritan, Mayflower and Volunteer is a matter of recent history. The designing of the Puritan by the late Edward Burgess marked the first great departure in the design and construction of American racing yachts, and for a long time the Boston designer was the foremost naval architect.

The first club book was issued in 1871, and the membership was so small and the fleet so insignificant compared with that of to-day that the names of the vessels and their owners are given to show the growth of the club since its organization:

SCHOONERS

Name.	Owner.	Name.	Owner.
Azalia.....	J. M. Forbes.	Idler.....	Thomas C. Durant.
Belle.....	J. P. Gardner.	Julia.....	Stanton Whitney.
Bonita.....	C. D. Brooks.	Juliet.....	H. N. Furbush.
Caprice.....	David Sears.	Juniata.....F. Manning.	
Dauntless....	Jas. G. Bennett, Jr.	Loiterer.....G. F. Heard.	
Dawn.....	P. S. Shelton.	Madcap.....	H. B. Jackson.
Edith.....	George O. Hovey.	Rebecca.....	John Heard.
Enchantress..	G. L. Lorillard.	Sappho.....	W. P. Douglass.
Ethel.....	J. M. Churchill.	Silvie.....	C. V. Whittier.
Flirt.....	James L. Little.	Wanderer....L. L. Lorillard.	
Glimpse.....	A. Freeman.	Wivern.....	T. Dennie Boardman.
Halcyon.....	James R. Smith.	Zephyr.....	S. G. Ward.

SLOOPS

Alarm.....	E. E. Preble.
Alice.....	T. G. Appleton.
Coming.....	R. D. Tucker.
Daisy.....	W. C. Otis.
Dream.....	G. S. Curtis.
Iris.....	E. D. Peters.
Louise.....	W. Tudor.
Narragansett.	F. G. Dexter.
Sadie.....	F. Burgess.
Violet.....F. D. Child.	
White Cap...	J. M. Forbes.

STEAMERS

Marquise.....	H. U. Jeffries.
Minnehaha...	T. C. Durant.

The two steamers in the list look lonesome when compared with the magnificent fleet of steam, gasolene and auxiliaries now enrolled in the club.

Massachusetts and New England having a great merchant marine, it was only natural that its hardy sons should take to yachting, and the club grew in size and importance year by year. With the increase of membership, the clubhouse was enlarged from time to time, until to-day it is one of the finest yachting homes in the country.

Its situation on the Neck, although well up in the harbor, is ideal. The clubhouse covers a great area and in spite of the fact that it is a combination of buildings, it is so designed and constructed as to be practically up to date and well suited for club purposes. There is a wide piazza running along the front of the house and on the northerly side, with a section off the ladies' dining room that is covered. On the second and third floors are dormitories, containing a number of bedrooms.

The club has a series of splendid courses laid out for both sailing and motor craft and has established a measured course of one and a quarter nautical miles, between ranges, for the benefit of motor craft. After spending considerable money and offering liberal prizes to encourage motor boat racing, and receiving but scant appreciation from power boat owners, it has practically abandoned its efforts towards awakening interest in this branch of the sport.

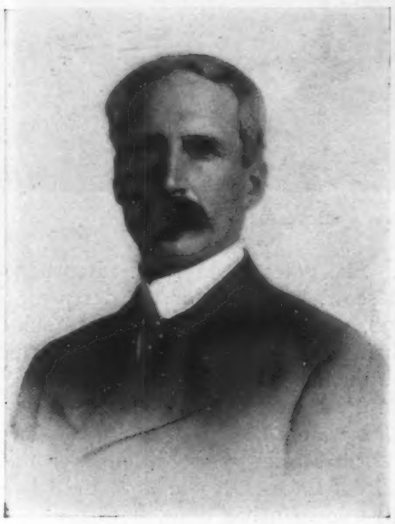
Through the efforts of Mr. Henry Howard, the chairman of its regatta committee in 1905 and 1906, the interesting international races for the Roosevelt cup between German and American *sonderklasse* boats in 1906 were arranged, which resulted in the return match at Kiel and also in the visit of the American yachtsmen to Spain. These races came at a time when yachting was in a bad way in Massachusetts and new life and enthusiasm were given to the sport. A committee of the club also arranged for *sonder* races for 1909, in which three German boats met three American craft off Marblehead, while this year the Spaniards are sending a team of *sonder* boats which at this writing are meeting an American team on the club's course.

A feature of the Eastern Y. C. is its cruise to the eastward as far as Bar Harbor each summer.

HALL OF THE EASTERN YACHT CLUB, WITH MODEL OF SCHOONER FORTUNA IN CASE.

Canada's Best

By C. H. J. SNIDER



ÆMELIUS JARVIS, CANADA'S FAMOUS RACING SKIPPER.

PLUNGING, double-reefed, into a green-brown sea that buries her to the mastfoot, Minota carries away her masthead spreader. She is "skinned to a marlin-spike" for the great international cup race, like her opponent, Genesee, plunging away in her wake. But no matter how bare she is stripped, something must be found for a jury spreader or she'll never reach the windward mark.

"Sail her, one of you!" says the skipper briskly, as the crew scan hopelessly her clean-swept hold, "and don't jerk the masthead out of her!"

He has whipped out the sheath knife from his belt and dives below. There is a squeak and splintering of pried boards, and he reappears with two long strakes of the yacht's ceiling. The only "spare gear" left aboard is a ball of marlin, and with this he seizes the two thin strips together. Then aloft he scrambles, treading the weather side of the mast hoops, and while the spar whips and groans, bending far over the seething water to leeward with him, he lashes the jury spreader into position, slides to the deck, and grabs the tiller again for the next "Hard-a-lee."

The skipper was Æmilius Jarvis, and this is the best picture I can give you of the great Canadian yachtsman and many-times commodore of the Royal Canadian Yacht Club, of Toronto. Strong on theoretical knowledge, an expert strategist, he is at his very best when the sudden emergency rises which makes the ordinary man quit. Had he been born a hundred years or so earlier, he would have made his fortune as a privateer or a privateer-catcher. As it is, he has made his fortune in stocks and bonds; but the man's real business is sailing. That does not mean that he is anything but the purest of Corinthians. But what he really lives in the doing of is sailing. It is meat and drink to him, and sleep as well.

Go into the office of Æmilius Jarvis & Co., in Toronto. It is the headquarters of one of the largest financial institutions in Canada. Ask for the head of the firm, and, if the boy seems dubious, murmur something in this style: "Center of lateral resistance—Canada's Cup—chain girth—'midship section—*R* equals 18 per cent. of the product of *L* multiplied by the square root of *SA*, divided by the cube root of *D*," and the underling will forthwith bow the knee and usher you into the Chief's office.

And such a room!—lined all around with hull and half models, from square riggers to skimming dishes. Where there are no models there are photographs of yachts—yachts by-the-wind, yachts running free, yachts at anchor, yachts in stays. Where there are no photographs there are blue-prints, and where there are no blue-prints there are oil paintings. The look of that room is enough to make a landlubber seasick and a sailorman sick of the shore. This is where Æmilius Jarvis—also known as "Diphthong" Jarvis, and by a few as "Millie" Jarvis, and by still others as Amelius Jarvis, through a misguided zeal on the part of the papers of his home town for misspelling proper names—works, surrounded by reminders of his play; yet sailing is more than play to him: it is the very breath of his life.

The presiding deity in the model-room you find to be a brisk, well-built man in middle life, with keen, dark eyes, hair turning gray, trim of beard and moustache in keeping with a general military bearing, and complexion toned to a deeper brown by the burning of much wind and sun. The great skipper-financier will receive you cordially, no matter what your business—and more than cordially if it is about boats. But it is not within any four walls you will find the real Æmilius Jarvis. You must leave the land for that.

Honestly, now, don't many of the fellows you see remind you of a German band when they climb into the gold-laced, brass-buttoned, silk-faced-lapel gear for club dinners and fleet functions? Well, Jarvis is not that sort. It's a treat to see him when he has "dressed ship." He has a good deal of stately dignity combined with all his quick agility, and in dress uniform he makes you wish he were an admiral. But he looks still better, say, sheathed to the eyes in sou'wester, slicker and seaboots, walking the quarterdeck in a gale of wind and sleet; or, barelegged, stripped to shirt and trousers, standing knee-deep in the swashing water of a swamping cockpit, shoving with all his might on the long racing tiller of a Canada's Cup hunter, hove down on her beamends in a squall, griping to windward like a devil clawing at the door of the pit.

One of the secrets of Jarvis' success is that the sailing game caught him young enough. As a school boy he used to arouse the envy and admiration of his companions by occasional trips in the sloop Annie Cuthbert—an old-time centerboarder preceding the Atalanta, Canadian challenger for the America's Cup. But he didn't learn his nautical A B C's on the cockpit cushions of a yacht. A salt-water voyage before the mast in the Can-

JARVIS ON THE JOB. HE IS AS MUCH AT HOME TIEING DOWN THE REEF EARING AS ONE OF HIS FOREMAST HANDS.

SNAPSHOTS OF THE COCKPIT OF THE ZAHRA, SHOWING HOW THE GREAT SKIPPER IS TRAINING UP A SUCCESSOR IN HIS SON.

adian square-rigger Edward Blake gave him a grip of practical shipwork which thirty-odd years of banking and broking have never been able to shake. Jarvis to-day can turn a short splice or tie a Matthew Walker as quick as the smartest Norwegian before the mast in his own big schooner Zahra; and, moreover, he sailed that selfsame schooner from Boston to her present home port, Toronto, late in the year in a three weeks' voyage when the mainsail had to be double reefed nine times.

It was the Canada's Cup that made Jarvis an international figure and has kept him so, but it will surprise those beyond local yachting circles to know the extent of his associations outside of the history of that famous trophy. Jarvis never built a Canada's Cup boat out and out; he has always sailed them for syndicates, in which he has had a share—often a generous financial one, and always one that made a huge demand upon the time of a very busy man. It has been a matter of chivalry and patriotism, rather than personal interest, his connection with the Canada's Cup. Time after time the Royal Canadian Yacht Club has requested him to take charge of its challenger or defender simply because he was the best man for the purpose; and, no matter what the sacrifice, he has always responded to the call. He was in the original Canada syndicate, and he, with a few friends, including H. C. McLeod, of Bermuda racing fame, built Beaver and Minota between them. Invader he had nothing to do with until she went to Chicago for the contest of 1901. In the same way his interest in Strathcona was confined to sailing her when she was turned over to the club. Nor was Adele a Jarvis boat, although he supervised her for her owner from the first letter to her designer; and while Zoraya won her greatest triumphs over Rochester, Seneca and Iroquois with Jarvis at the helm, the great skipper never had any connection with her other than sailing her half a dozen times.

Jarvis' own boats have not been the international challengers, but they have been better known on the lakes than those challengers themselves—and they have been of all sorts and sizes. The fine old sloop White Wings, the best of Cuthbert's centerboarders, got her reputation under Jarvis' ownership in 1887-88; then there were the cutters Whistlewing and Samoa, of his own design, and the cutter Merrythought, which he re-rigged and turned from a perpetual loser to a regular winner. These were all craft of about Class M size, Universal Rule. The ketch Sitarah followed the Merrythought—a larger craft, marking the great skipper's departure into auxiliary power. His present ship is the schooner Zahra, formerly of Boston; and all of the yachts named have been floating homes where he and his family have spent the greater part of every summer. The result is natural enough; young Wm. Jarvis, better known as "Bill," is known already, although yet in his teens, as one of the smartest yachtsmen and small boat handlers in the R. C. Y. C.

The smaller classes have also received the attention of Æmilius Jarvis. Thistledown, practically a big canoe with a stationary centerboard loaded with a ballast bulb, was the first fin-keeler ever seen on Lake Ontario. She dates from 1890. Bonshaw, a square-bilged, sharp-nosed scow, intended for the defense of the Seawanhaka Cup in 1898, was Lake Ontario's first "sidewalk"; and Jarvis bought them both out, tried out their merits and demerits, and parted with them. It is this actual experience with every type of boat, from the skimming dish to the keel cutter, that gives his opinion that weight which is felt at the annual meetings of the Lake Yacht Racing Association and the Yacht Racing Union of the Great Lakes. No man on the lakes has studied types so carefully; no man has done more towards revising measurement rules and scantling tables, and no man has more at heart the wholesome type of boat.

Nobody can put Jarvis' success down to luck. As a matter of fact, he has had more than his share of bad luck in international contests. It was by a little luck, it is true, in having light-to-moderate weather when sailing against a much larger boat that he won the Canada's Cup originally in the Canada-Vencedor match off Toronto in 1896; but it was still more by good management. It was certainly by bad luck that he lost the Canada's Cup in 1899, Beaver, a heavy-weather clipper, breaking down at the very start—the only day in the whole series there was a decent breeze. Minota, in the deciding race for the Fisher Cup, kept carrying away gear, until finally, after the incident related at the outset of this article, her main shroud turnbuckle went, and, to save dismasting her, Jarvis had to up helm and run back to the shelter of the harbor.

Good luck and good management won the Canada's Cup back at Chicago in 1901, when he sailed Invader against Cadillac, a boat her superior by a minute a mile when there was much of a breeze, and her equal, equally handled, in light airs. Three out of four days there were light winds in this contest, and the cup was won by sheer stick handling. Some of the windward turns were hair-raisers. Jarvis sails to windward always with one eye on the compass and the other on the masthead wind-finder. He knows to a sixtieth of a degree how close his boat will sail to the wind, and, once the lubber mark shows she is lying less than the exact number of points off the course, around she goes to try it on the other tack. That's a trick too many for most of the plain full-and-by skippers.

"Don't move, Bill," Jarvis said to the paid hand on Invader at the end of a nip-and-tuck three-hour beat to windward in the last race of this series, "but just tell me, has my hair turned white?"

Whether it had or not, the closeness of that beat in the silent summer afternoon was enough to age anybody. But Invader turned the weather mark ahead, and after that the race was a procession.

Then, again, it was luck—hard luck—when he lost the Canada's Cup in 1903. The first day Strathcona was outsailed by Irondequoit, but Barr, Irondequoit's skipper, was outsailed by Jarvis. The latter won in sensational style, slowly overhauling her opponent as they ran to the finish, with spinnakers set and every-

thing aboard the big cutters—they were the largest boats that ever sailed for the Canada's Cup—pulling bravely. Jarvis luffed as though he was going to pass to windward; Barr luffed to avoid being overtaken. Jarvis luffed a little more, so did Barr; until, an eighth of a mile from the buoy, the boats were five or six points to windward of their true course, and Irondequoit, without having lost any of her lead, was further away from the buoy than Strathcona. Her spinnaker, blanketed by the pursuing boat or, more likely, caught aback by the excessive luffing, fluttered wildly and collapsed in a raffle of boom, outhaul, forward guy, after guy, sheet, tack and lift, among her headsails. Then Jarvis swept his helm aweather, and while Irondequoit's crew were piled forward straightening out the mess, Strathcona shot across her wake, square before the wind, and blew over the finish line a winner.

In the next race Irondequoit's skipper seemed unable to get out the speed that was undoubtedly in her. Strathcona won by 10 minutes, and the challengers promptly put in a new skipper, Addison Hanan. He came aboard after Irondequoit had left her moorings for the third race, and startled everybody by winning it and the fourth; but in neither of these had Jarvis much ill luck to complain of. He was simply up against the combination he most delights in—a smart man in a smart boat. But the fifth and deciding race *was* marked by decided hard luck. Strathcona, leading by almost an eighth of a mile, ran into a soft spot, and rolled and rolled and rolled. Irondequoit overhauled her, passed within 200 yards, and sailed on down a long windlane without a halt. This happened near the turning buoy, and the race practically ended there. No one could hope to catch Irondequoit after that, except by a similar fluke—and a fluke like that doesn't happen twice in a day very often. That was how Toronto lost the Canada's Cup. It has been lost ever since.

When Jarvis went back after the Canada's Cup in 1907 and failed to trim Seneca with Adele, luck for once had nothing to do with his failure. He was simply sailing a handsome, slowish boat against a Herreshoff speed marvel. Adele may be in Seneca's "class" on measurement, but with the boats equally well sailed Seneca is in a class by herself for speed. She defeated Adele easily in a drift the first day, downed her in a whole-sail breeze the next, and made an exhibition of her in the piping wind of the last day.

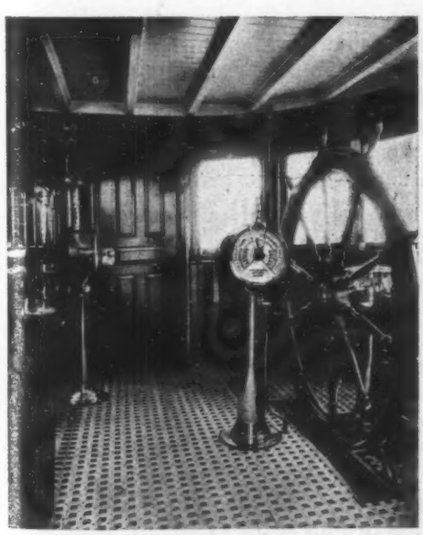
Even in such a contest as the George Cup at Kingston, last summer, Jarvis' ill luck was again in evidence. He was sailing Whirl for her owner. She was the fastest boat of the three contestants, and he sailed her well; but flukes of wind and misplaced turning marks lost her first place in two races, and although she won the final race and was tied up, with her skipper on the pier, in time to watch Kathleen and Crescent finish, the fate of the cup lay between these two boats from their standing on points. And yet, despite all these instances of hard luck, Jarvis is the last man in the world to whine about it, or even to admit it. It has fallen to my lot to be the first, or about the first, man to speak to him after most of his big races; and when he has lost his expression has never been "Blanked hard luck," but always, "Guess they were faster than we were to-day. We'll see what we can do next time."

Of course, his crews worship him. They are always as largely amateur as possible, and chosen by himself, whether he owns the boat or just sails her. There are some good men who won't sail with him—and a whole lot of bad ones. I mean good and bad from the standpoint of seamanship, of course, not morals. He is not prolific in curses, but his words have the bite of a whiplash; he makes a crew jump.

"Don't play with it! Get it down! Get it down!" I have heard him sing out after eight men have broken their backs flattening in the last inch of mainsheet; and, at the sting of the last word, they have jumped as though touched with hot irons and dragged in a foot more rope if they had to stretch the manila to do it. Some independent spirits won't stand being driven, and, of course, incompetents can't. So that there are some really good lake yachtsmen who wouldn't care to sail in Jarvis' crews—and a lot more who would like to but couldn't. But to graduate from one of his cuphunters with his comment "a smart man" marks you "A-one-with-a-star" among all those who go down to the lake in yachts.

The Part Gasolene Plays in Mine Planting

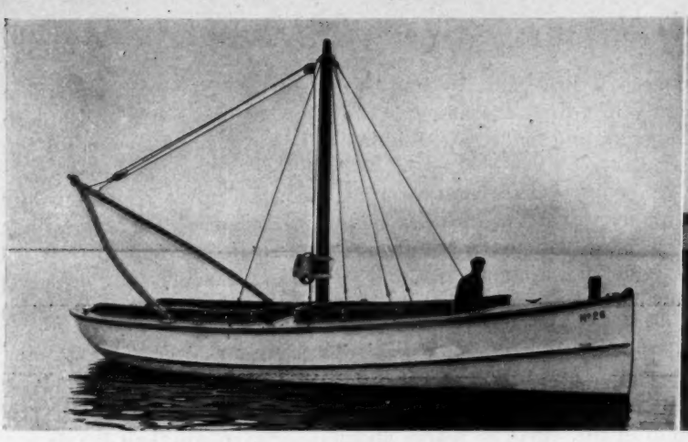
By JOSEPH B. BAKER



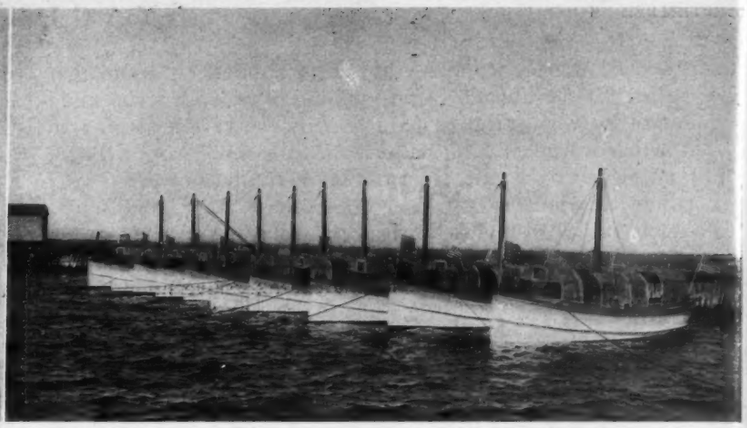
PILOT HOUSE OF A MINE PLANTER.

ONE of the most interesting activities of the United States War Department, in providing for coast defense against hostile attack in time of war, is the "planting" of submarine mines in the harbor channels, designed to blow up the enemy's ships attempting to enter. In thick weather—fog, mist or smoke on a dark night—searchlights are ineffectual in locating an attacking fleet, and if there are no mines the fleet can creep along (though slowly) past the forts. If the harbor is mined, however, the advantage is with the defense, since no naval commander will risk a battleship voluntarily against a mine field known to be in operative condition.

Mine-planting is done by the use of specially equipped vessels in the service of the Coast Artillery Corps, and is an interesting and dangerous operation, requiring the utmost precaution and alertness. There are two kinds of submarine mines: non-controllable mines, which explode when the vessel passing up the channel comes into contact with them, and electrically controlled mines which are fired from a distance, when the vessel is observed to be passing over them. To plant non-controllable mines one vessel is sufficient; this vessel starting out over the determined course and dropping the mines overboard at proper distance apart as she proceeds. To plant electrically-controlled mines, three vessels are needed: the "mine-planter," a good sized vessel equipped with special appliances and having ample deck space forward and a minimum of rigging to the rail; a "distribution-box launch," designed to handle the distribution-boxes, which serve to interconnect the different mines with the electric cable running to the firing point on shore; and an auxiliary boat as a "marker," which



DISTRIBUTION BOX LAUNCH, SHOWING DERRICK FOR HANDLING OF THE BOXES AND THE TWO COCKPITS.

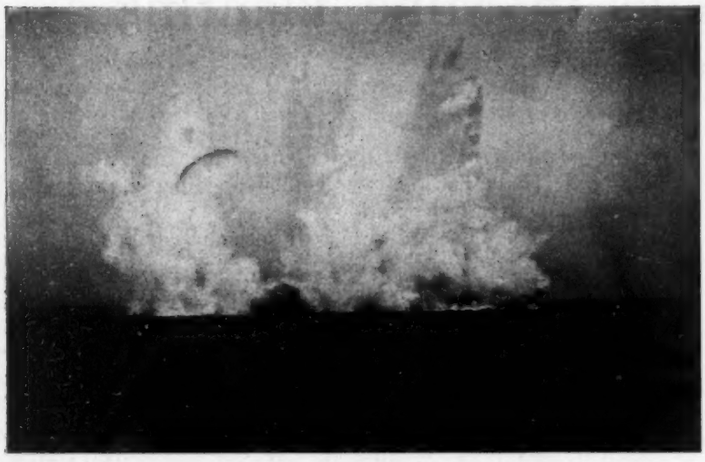


TEN 32-FOOT DISTRIBUTION BOX LAUNCHES OUT OF AN ORDER OF THIRTY-TWO PLACED BY THE UNITED STATES GOVERNMENT.

may be a small power launch or an ordinary row boat.

There are at present three mine-planters stationed in New York Harbor: the General Edward O. C. Ord, the General John M. Schofield, and the General Royal T. Frank. These vessels, together with a fourth, the General Samuel M. Mills, now stationed at Fort Monroe, Virginia, are sister ships, and were all completed in May and June, 1909, the one first mentioned having been built by the Pusey & Jones Company, Wilmington, Delaware, and the other three by the New York Shipbuilding Company, Camden, New Jersey. These four mine-planters are certainly fine boats, well equipped for their important work. The Government proposal and specifications for them, dated 1908, called for "a twin-screw steel steamer for submarine mine service, Coast Artillery, U. S. A.," of first class materials and workmanship in accordance with the requirements of the American Bureau of Shipping for first class vessels. The following is a brief description of the Schofield, which the writer had the pleasure of inspecting recently by the courtesy of her Commanding Officer, Captain Homer B. Grant, the others being of practically the same type.

She is 165 feet long on deck (154 feet on load line), 32 feet beam, and when loaded 12 feet draft, aft. The speed on her trial trip was 14.85 miles per hour. In running from Newport to Boston on one occasion, she made 15 knots in one hour and seventeen minutes. She is propelled by two vertical, inverted, direct-acting, compound surface-condensing engines with 18-inch and 36-inch cylinders, 24inch stroke, and about 145 revolutions per minute. Steam is supplied by two horizontal Scotch boilers, at a working pressure of 150 pounds per square inch. She is rigged for her special work with heavy derrick masts and cargo booms. There is a good sized flush deck forward, open and unencumbered over most of its surface, there being no permanent fittings on same, except a double steam capstan in the bow. There are a couple of powerful electric winches below the deck, especially adapted for "taking-up work," the controllers and brake and trip lever handles being installed on the main deck, but well back out of the way. The equipment of the vessel for handling the mines and their cables and appurtenances is very complete and efficient, and includes mine and anchor davits arranged to be stepped in the rail at different points, bow davits with a snatch-block adapted for convenient handling of the "multiple" cable, deck fittings and flush sockets for the convenient attachment of the different shears and appliances for planting and taking up mines, etc.

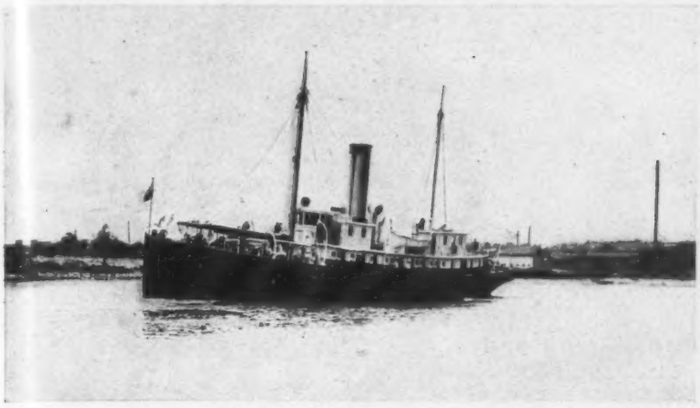


SIMULTANEOUS EXPLOSION OF THREE SUBMARINE MINES AT MAXIMUM HEIGHT OF THE WATER. MINE ON LEFT LOADED WITH EXPLOSIVE "D," ON RIGHT WITH GUNCOTTON, AND ONE IN THE MIDDLE WITH TRINITROTOLUOL. THIS IS THE VERY LATEST SUBMARINE MINING EXPERIMENT PERFORMED. REPRODUCED BY COURTESY OF "THE ARTILLERY JOURNAL."

The Schofield has a main deckhouse of steel in the midship portion of the vessel. On the main deck level this house is continous fore and aft, and is divided into a saloon, with two officers' cabins adjoining, engine room, with engineers' quarters adjoining, steering-engine room, galleys, fiddley, officers' bathroom, lavatories, washrooms, pantries, etc. The ship is equipped with the new submarine signal system, with receiving apparatus in the pilot house, by means of which the vessel's course and position may be determined with reference to the submerged bells which are now installed on many of the Government lightships. Two life-boats are slung on davits on top of the deckhouse, and an electric launch is carried in chocks on the main deck.

The regular ship's company comprises the commanding officer, who is detailed for the berth from the Coast Artillery, and eighteen men, as follows: Sailing master, two mates, two engineers, four firemen, four deckhands, two oilers, steward, cook and pantry man. For the mine work sixteen enlisted men—a sergeant, two corporals and thirteen privates—are carried. The crew and the enlisted men have separate quarters, galleys, wash rooms, etc.

In time of peace the mine-planters are engaged in practice work: planting and taking up mines (non-loaded), followed by the planting of loaded mines and the blowing up of a target towed back and forth over the mines, to show the men what the work amounts to. In Northern waters this practice work is done in summer, the vessels proceeding to Southern waters as winter comes on, and about six weeks' tour of duty being put in at each station. Thus the Schofield, at the time this article is being written (December 1909), is tied up at the Municipal Recreation



STEAM MINE PLANTER GENERAL EDWARD O. C. ORD LEAVING WHARF ON BUILDERS' TRIAL. SHE IS 165 FEET LONG AND CAN MAKE 15 KNOTS PER HOUR.

Pier, foot of East 24th street, Manhattan, pending routine (annual) repairs. When the repairs are completed, she is to proceed to New Orleans, and will be employed there on mine work until about the 15th of February, 1910. Her next station is Tampa, Florida, where she remains till April 1. Next, Charleston, South Carolina, to May 15. Then back to the North Atlantic for the summer, spending the time in New York and in New England waters.

In the actual work of planting electrically-controlled mines, the vessels proceed to the projected mine-field with the loaded mines, their anchors, mooring ropes, cables, and other appurtenances piled up on the forward deck. The cables are fed aft where they are laid in figure-of-eight coils on top of each other in the reverse order in which the mines are to be planted. In modern practise the mines are planted in groups of nineteen, each loaded with about 100 pounds of some high explosives, usually wet guncotton, detonated by a small charge of dry guncotton. By the use of the distribution box, which is planted just back of the group of mines, the individual mines are connected to the multiple cable which runs to the firing point, so that any one of the mines may be fired independently of the others. This distribution-box launch is the center of the planting operations; and the mine-planter proceeds from the launch, paying out cable as she goes till the determined point is reached for the first mine, at which point the mine anchor and mine are let go over the side. The auxiliary boat then ties to this mine, serving as a marker for the planting of the next mine, and also giving the Range Section on shore an opportunity to observe and plot the location of the mine. Meanwhile, on board the mine-planter and the distribution-box launch, the cables are being spliced and the connections made, the work of planting and connecting going on harmoniously until the entire group is in place across the channel. By this procedure a harbor channel may be closed against the enemy at the rate of 1800 feet in two and a half hours, or one and a third miles of channel per day, assuming favorable conditions of wind and tide.

In some respects a more difficult operation than the planting of the mines themselves, is the planting of the distribution boxes, which interconnect the several mines of a group. A distribution-box, consisting of an iron case weighing about 300 pounds, containing insulated splices and cross-connections, and having a number of cables running from it, makes an unwieldy structure to handle, and one requiring careful work in casting it overboard to prevent snarling and kinking of its cables.

In order to facilitate the handling of these boxes, a special type of power boat has been designed for the Coast Artillery called a "distribution-box launch." These boats are 32 feet long, 9 or 10 feet beam and 3 feet draft, well and substantially built, and equipped with a 12-horsepower, two-cylinder gasolene engine placed aft. The control of the engine is placed forward, enabling the boat to be steered and handled by one man. There is a 50-gallon copper gasolene tank carried in a copper-lined compartment under a removable deck forward. There are two cockpits, one forward of the other, and separated from it by two watertight bulkheads between which is stepped a stout derrick mast. This mast is securely guyed to the boat, and is equipped with a winch for operating a hoist for a galvanized iron shear, carrying at its end a sheave and arranged to be lowered so as to project over the stern of the boat. The forward cockpit can accomodate twelve or fifteen men. In the after cockpit is a substantial platform or table, flush with the rail and covered with galvanized sheet steel, on which the box is placed while the men are working, and from which it is hove overboard without risk of fouling its cables.

The boat thus equipped has proved its serviceability in mine-field work. It has shown a speed of 8.5 miles per hour in official trials, is a good sea boat, and has good buoyancy and carrying capacity. Thirty-two of these vessels were built by the Electric Launch Company of Bayonne, New Jersey, in the summer of 1908, and delivered at the record rate of one a week; and the boats have been assigned for use in the mining of rivers and harbors along the Atlantic and Pacific coasts, Hawaii and the Philippine Islands.

The School of Submarine Defense, for the instruction of army officers, was formerly located at Fort Totten, New York, but was moved to Fort Monroe several years ago, and was united with the Artillery School there. The present organization, known as the Coast Artillery School, has three departments, viz.: Artillery and Gun Defense, Electricity and Mine Defense, and Enlisted Specialists.

OFFICERS' QUARTERS OF THE MINE PLANTING STEAMER GENERAL EDWARD O. C. ORD.

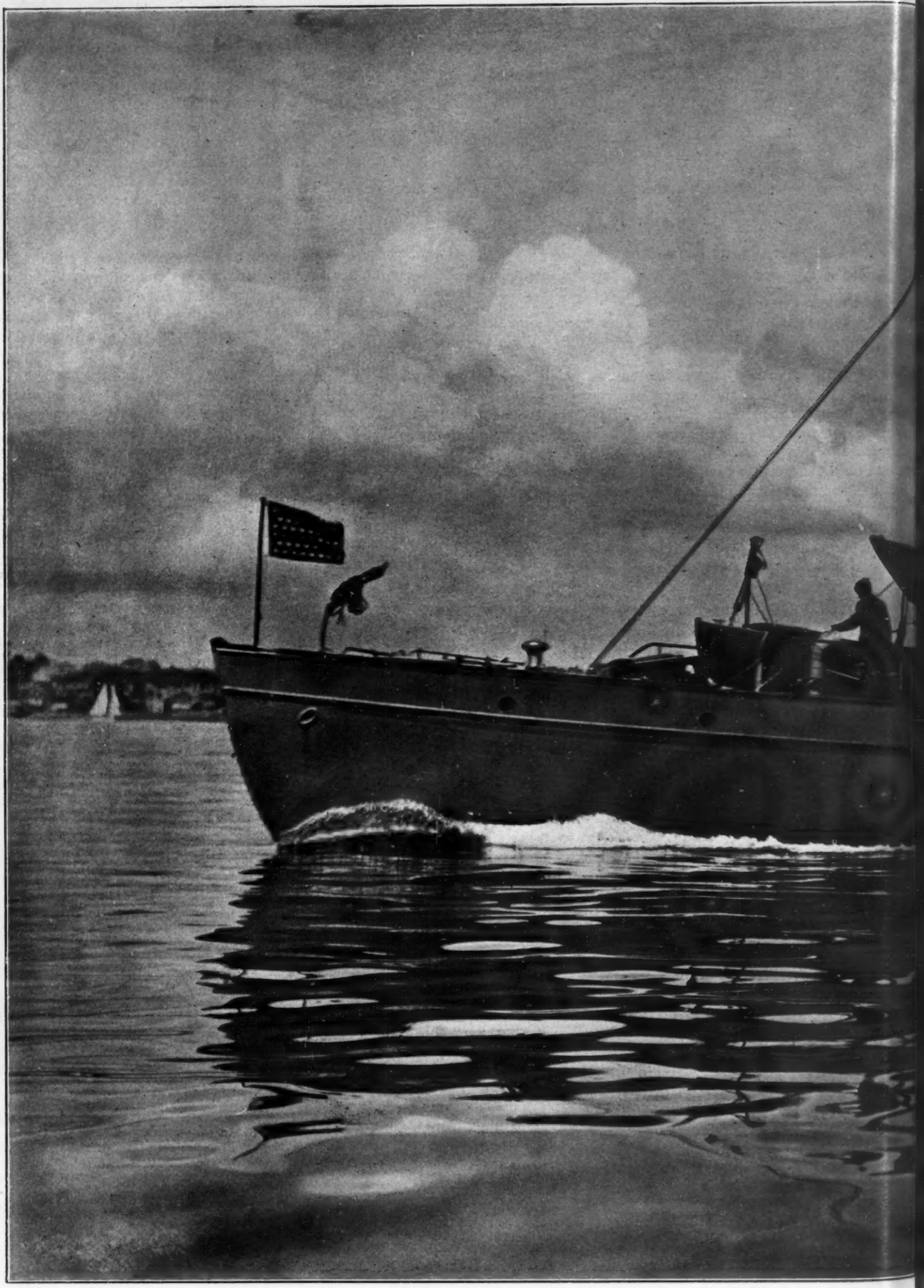


Photo by W. B. Jackson.

By Motor Boat to the Lake of the Dismal Swamp

A PORTION OF VIRGINIA BUT LITTLE KNOWN TO THE OUTSIDE WORLD—A DESCRIPTION OF THE LAKE DRUMMOND CANAL BETWEEN CHESAPEAKE BAY AND ALBEMARLE SOUND

By COMMANDER C. S. STANWORTH

IN the early spring, when pond lilies are in bloom and before mosquitoes have begun to swarm, is the time to make the motor boat trip from Norfolk, Va., to Lake Drummond in the centre of Dismal Swamp. In a wild and inaccessible country the lake is now seldom visited, though it can be reached from the Dismal Swamp Canal en route from Norfolk to Albemarle Sound.

A run of seven miles from Norfolk up the southern branch of the Elizabeth River, past the navy yard, under three railroad bridges and past the naval magazine at St. Julien's Creek brings you to the mouth of Deep Creek, which is marked by a large sign on spiles. A three-mile run, keeping in the centre of the creek, and the village of Deep Creek, where the Dismal Swamp Canal proper begins, is reached. Here you pay the canal fee of $5.00 and lock up 12 feet into the Dismal Swamp Canal. The canal itself is 22 miles long, of monotonous straight cuts, locking down into the Pasquotank River at South Mills, North Carolina.

THE LAUNCH WAIOLI, IN WHICH THE TRIP WAS MADE.

Ten miles from Deep Creek is the feeder from Lake Drummond to the canal, about three miles long, 36 feet wide, but now so silted up that only 30 inches of water can be depended upon. At the head of the feeder is an abandoned lock, at which launches used to be locked up 10 feet into the lake.

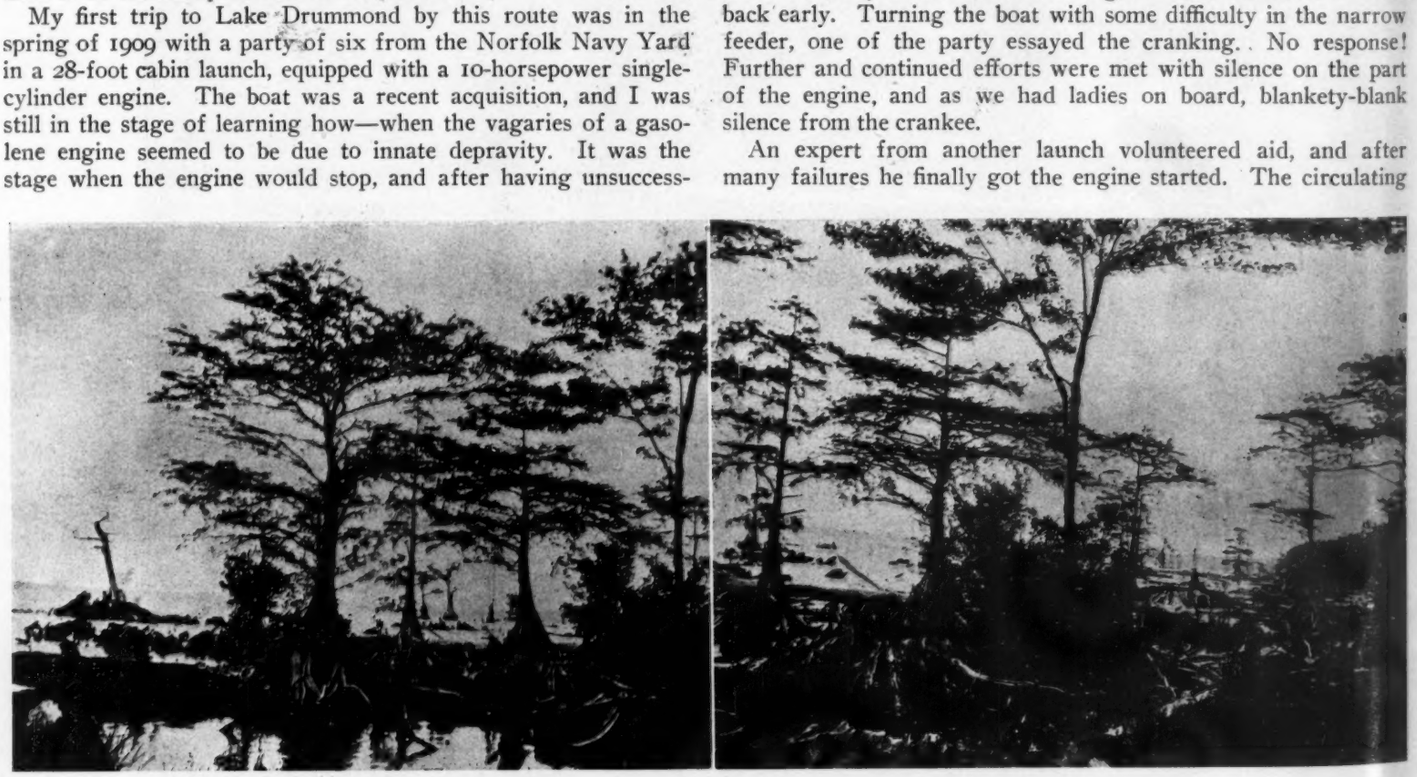
My first trip to Lake Drummond by this route was in the spring of 1909 with a party of six from the Norfolk Navy Yard in a 28-foot cabin launch, equipped with a 10-horsepower single-cylinder engine. The boat was a recent acquisition, and I was still in the stage of learning how—when the vagaries of a gasolene engine seemed to be due to innate depravity. It was the stage when the engine would stop, and after having unsuccessfully tried every remedy that books or experience suggested and you had given your last despairing whirl of the flywheel before hoisting a distress signal, it would wake up and resume its "chug-chug," leaving you in wonderment as to what made it stop in the first place and what made it start again.

Going up, the engine was on its good behavior, and I felt quite proud of boat and outfit. Arriving at the head of the feeder, we tied up to a small landing and a walk of one-quarter of a mile along the bank brought us to the shores of Lake Drummond.

The lake is approximately circular in shape, about three miles across, and is about 22 feet above tidewater. The water is a reddish brown, discolored by the vegetation of the swamp, but is of excellent drinking quality. In the days when sailing vessels carried a large supply of water in casks and tanks, this water, called juniper water, was in great demand, on account of its keeping qualities. Old stumps and bare cypress trees fringe the shores of the lake, giving an air of desolation thoroughly in accord with the description in Moore's poem, the "Lake of the Dismal Swamp."

Despite the good behavior of our engine going up, previous experience of its vagaries, eloquently testified to by raw blisters on both of my hands from cranking, made it advisable to start back early. Turning the boat with some difficulty in the narrow feeder, one of the party essayed the cranking. No response! Further and continued efforts were met with silence on the part of the engine, and as we had ladies on board, blankety-blank silence from the crankee.

An expert from another launch volunteered aid, and after many failures he finally got the engine started. The circulating



OLD STUMPS AND BARE CYPRESS TREES FRINGE THE SHORES OF LAKE DRUMMOND.

FEEDER, LAKE DRUMMOND.

FEEDER OF THE DISMAL SWAMP CANAL.

NEARING LAKE DRUMMOND.

pump had been a frequent source of trouble, and now that refused to work. It was a rotary pump, the water going into the muffler, as we afterwards discovered, just at the point where it got a back pressure from the discharge gases. Not until the water discharge pipe was disconnected from the muffler could we get the flow of water started. The muffler was connected again and off we started, our expert remaining with us until we reached Deep Creek. Our engine had been giving no trouble, but we saw him leave with something of the same feeling that one sees the doctor leave the house in a case of severe illness.

We started up again with but little trouble, but about half way down the creek the engine balked. A long, long struggle, with darkness closing in, and the engine started up again—no reason for stopping, no reason for starting, so far as we could discover.

This time we got half way to the navy yard, when a dark shadow in the water ahead was seen to be a raft of logs, and fearing we could not clear it, the spark was cut off. We cleared the raft and again commenced the struggle with the engine. There were four men to alternate in cranking, as blisters prevented me, and the engine seemed to take a malicious pleasure in exasperating the most husky one of the four by refusing to start for him. After numerous failures, he would grasp the flywheel with an expression plainly denoting: "I will try you just once more." Promptly the engine would give two or three encouraging explosions and we would cry, "Hurrah! you have got her"—but he hadn't. Finally, when good and ready the engine started up and we reached the navy yard and disembarked four of our party, who remained on the dock to jeer us—but the engine started promptly this time.

Soon, however, the pump refused to work, and our cylinder began to heat up, so that we had to stop twice to cool the cylinder with water-soaked waste. Our final destination took us under a bridge with ample headroom, except at high water. I knew it lacked an hour of high tide, and dreading a voluntary stoppage of the engine, concluded to risk it. The forward end of the cabin went under, but the hatch combings did not. Fortunately it was a sliding contact and not much damage was done.

CHART OF THE LAKE DRUMMOND CANAL CONNECTING CHESAPEAKE BAY AND ALBEMARLE SOUND.

This spring I made another trip in the same boat, but equipped with a 2-cylinder, 10-horsepower Vim engine and a Roper propeller, and we had no trouble, except that the feeder had silted up so we could barely get up it.

It is well to follow the main channel buoys going up the southern branch of the Elizabeth River, for in trying to cut inside the red buoy below Money Point we grazed bottom.

The canal is a straight cut, and it is well to relieve the monotony by stopping at Wallacetown, about one mile from the feeder, where parties are always welcomed.

The Lake Drummond Canal is used a good deal by motor boats going to and from Florida or the South from northern ports for the winter. It cuts off the long outside trip around Hatteras and leads one into Albemarle Sound 16 miles south of Elizabeth City, N. C. The locks are large enough to accommodate vessels of considerable size, though the draft is naturally limited, the dimensions of the locks being 250 feet long, 39 feet wide and with a maximum draft of 8½ feet.

The distance from Norfolk via the south branch of the Elizabeth River to the mouth of Deep Creek is seven miles, with an additional three miles up the creek to the first lock. From here to South Mills the distance by canal is twenty-two miles, where there is another lock, and the route from there is through Turner's Cut and the Pasquotank River, eighteen miles to Elizabeth City, where the river broadens out.

This makes the total distance from Norfolk to Elizabeth City fifty miles, with sixteen more to the mouth of the sound. It can be done in a day by a motor boat of average speed, allowing for the unavoidable loss of time at the locks.

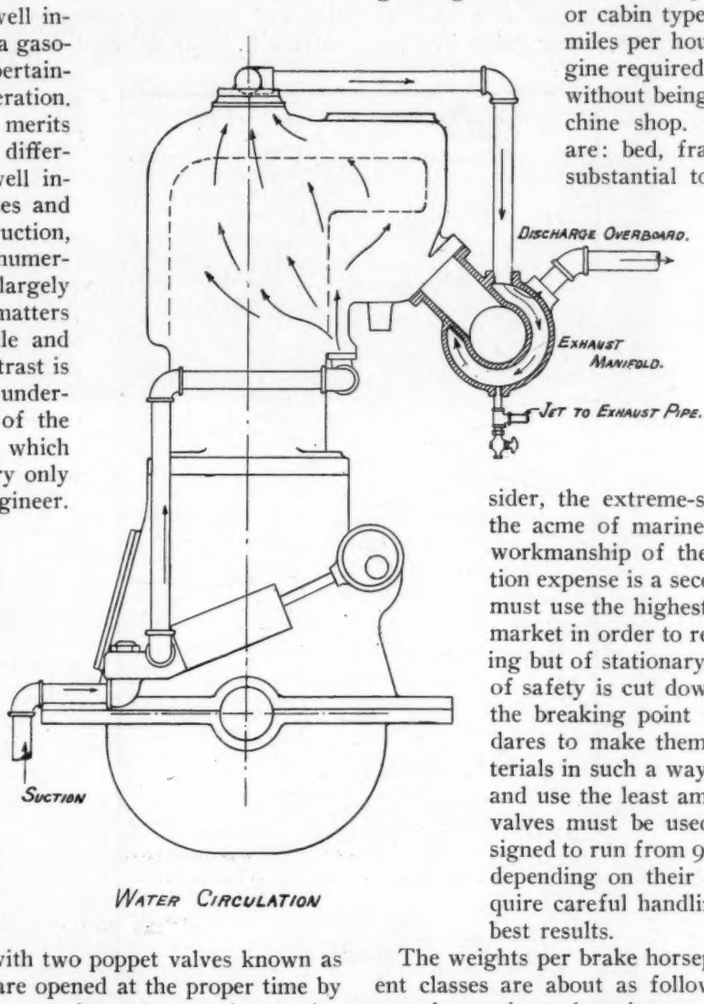
The 4-Cycle Gasolene Engine

By HARRY T. WOOLSON

PART I.—HINTS REGARDING THE INSTALLATION OF ACCESSORIES

THE 4-cycle gasolene engine, by reason of its extensive use for the past eight or ten years in automobile and motor boat and as applied in a number of cases for small power requirements, is, we might say, becoming almost a household article and, like many another which started its career as a luxury, has so grown into the daily life of the public that it is no longer classed as a luxury but as a necessity, which it would be a great hardship to be deprived of.

It is surprising to find how well informed is the average owner of a gasolene engine concerning points pertaining to its construction and operation. He has at his tongue's end the merits of different systems of ignition, different carburetors, and is often well informed as to valve settings, sizes and openings, materials of construction, and a host of other points too numerous to mention. This is owing largely to the publicity given these matters through the pages of automobile and motor boat magazines. The contrast is great in comparison with the understanding by the general public of the workings of the steam engine, which are to them, as a rule, a mystery only to be disclosed to the licensed engineer.



Water Circulation

We will therefore but briefly review the working principle of the 4-cycle or 4-stroke engine, which goes through a cycle completed in two revolutions of the crankshaft or four strokes of the piston—a simple piece of mechanism, especially when shorn of all refinements and accessories. It consists, in its simplest conception, of a trunk piston working in a cylinder, the reciprocating motion of the piston being changed to a rotative by means of a crankshaft and connecting rod. The cylinder is provided with two poppet valves known as inlet and exhaust valves, which are opened at the proper time by means of cams. The four strokes are known as suction stroke, compression stroke, explosion-firing or working stroke, and exhaust stroke. Their names quite sufficiently explain the different operations.

As our especial interest is in 4-cycle engines as applied to motor boats, let us consider the different types of engines in use for this purpose to-day. They may be divided roughly into three classes, which of course are bound to overlap one another to a certain extent in special cases, although the general lines of demarkation are quite distinct, the distinguishing point and the one governing the design of each class being the type of boat in which it is used. The classes are as follows: Cruising engines, semi-speed engines, extreme-speed engines, the names designating the type of boat for which each class is designed.

The characteristics of the cruising engine are: Parts are made very heavy and substantial; bearing surfaces are large, and ports, passages and valves are designed for a low number of revolutions—350 to 450 maximum. In this class of engine cheap materials can be used, simple construction is the rule, often, although not necessarily, crude. This class is used in heavy cruising boats making up to 16 miles per hour.

The semi-speed engine is a class for which there is a large and growing demand and is used principally in day boats, either open or cabin type, where a speed of from 16 to 24 miles per hour is desired, and a substantial engine required which will stand up for long runs without being constantly within reach of a machine shop. The characteristics of this class are: bed, frame and cylinders are sufficiently substantial to make a stiff engine, though of lighter weight than the cruising type; pistons, connecting rods and moving parts in general are as light as possible, to obtain smooth running at the necessarily high revolution, which ranges from 650 to 900, for which reason valves and passages must be designed of ample size.

The last type we will consider, the extreme-speed class of engines, represents the acme of marine gas-engine design and calls for workmanship of the highest order. In its construction expense is a secondary consideration; the designer must use the highest grade materials obtainable in the market in order to reduce all weights, not only of moving but of stationary parts, to a minimum. The factor of safety is cut down so that parts will come as near the breaking point without breaking as the designer dares to make them; his endeavor is to use the materials in such a way as to obtain the greatest strength and use the least amount of material; extremely large valves must be used. Engines in this class are designed to run from 900 to 1,200 revolutions per minute, depending on their size. Such engines naturally require careful handling to avoid injury and obtain the best results.

The weights per brake horsepower of the engines in the different classes are about as follows: Cruising engines, 50 to 100 pounds; semi-speed engines, 25 to 30 pounds; extreme-speed engines, 10 to 15 pounds.

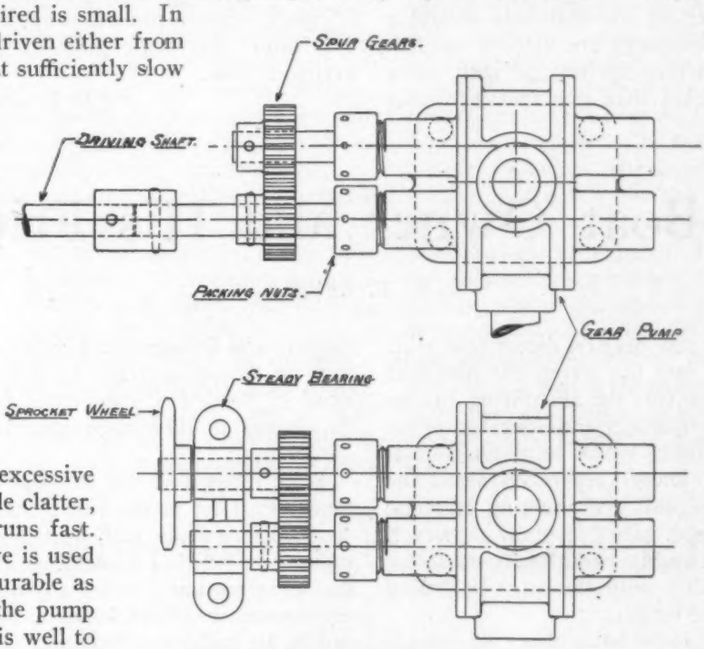
In the average 4-cycle gasolene motor boat engine only 20 per cent. of the heat in the gasolene is changed into useful work. In fact, it takes a good engine to show this degree of economy. Of the remaining 80 per cent., 15 per cent. is wasted in friction in bearings and cylinders, 35 per cent. is carried away in the exhaust, and 30 per cent. passes through cylinder walls into the cooling water. These are average per cents. and vary in different makes of engines.

To satisfactorily deal with the latter portion of heat loss is of great importance and is often the source of much trouble to the engine owner. Cylinders should be well jacketed at least as far down as the top of the piston when it is at the bottom of its stroke; an inch or two further than this is very good practice.

In cruising engines where weight is no objection the jackets are sometimes carried to the lower ends of cylinders. This has an advantage when an engine does heavy duty on long runs, as the heat is prevented to some extent from being transmitted from cylinders to frame and eventually heating the whole engine. As the water supply is unlimited, it should be an easy matter to keep a marine engine cool with a properly designed pumping system. The suction lift is very slight, and in a majority of cases in cruising boats the pump is below the water line, so that it is constantly primed by gravity. In speed boats, however, owing to the shallow draft and necessary rake of shaft to provide propeller clearance, the shaft line at engine is occasionally above the water line, giving the pump a suction lift.

Having a difference in temperature between inlet and outlet cooling water of about 50 degrees, the pump should have a capacity of 10 to 12 gallons per brake-horsepower per hour.

The importance of a good cooling water service cannot be overestimated. The cruising type engine is usually equipped with a plunger pump, which is very suitable for slow-running engines, where the amount of water required is small. In this case a plunger pump can be driven either from the crankshaft or the camshaft at sufficiently slow speed to give satisfactory results and long life to the pump. The greatest trouble experienced with the plunger pump is with the valves, due to the continual hammering on their seats. Pump valves should be light and large in diameter, so as to obtain necessary area with small lift. A pump valve giving trouble in this way can be helped by reducing its lift, provided the amount of discharge is not too greatly reduced. The low lift prevents excessive hammering and also a disagreeable clatter, sometimes heard when a pump runs fast. Often the commercial check valve is used on the pump; these are not so durable as those properly constructed into the pump body, but they are cheap, and it is well to be supplied with a spare valve in case of trouble.



OUTSIDE GEAR DRIVE ARRANGEMENTS FOR GEAR PUMPS.

The semi and extreme speed engines are best equipped with rotary or gear pumps. Their large horsepower compared to their size would make a large plunger pump necessary, requiring considerable speed reduction, owing to high engine speed, to give satisfactory results. Secondly, as weight is so important, especially in the extreme-speed type, it is essential to have a light pump; and in order to obtain lightness some type of rotary pump is used. There are a number of varieties of so-called vane pumps on the market, many of which give good results. The centrifugal pump is seldom used for boat work; but gives excellent results if it can be properly installed, low enough so that the water will flow to it by gravity and it will not require priming to start pumping.

A pump which is widely used with success on speed-boat engines is what is known as the gear pump, consisting of a bronze case with bearings in which run a pair of spur gears, meshing. The gears fit the case snugly at their circumference and ends. The pumps are generally made with suction at bottom and discharge on top, the shaft of one gear extending through the case for driving. These pumps are usually driven about one and one-half times engine speed. Pump-gear bearings of lignum vitæ have been found to give good results. The water acts as a lubricant for this wood, and it seems to stand the wear well. A difficulty experienced with gear pumps is that, owing to the comparatively small diameter of gears and large teeth, the wear on the teeth is excessive. This can be entirely overcome by extending both gear shafts through the case, and fitting on these a pair of finer pitch bronze or steel spur gears, so that the driving is all done on the outside, thus taking the wear off the gears within the case. This modification, if it can be applied to a gear pump giving trouble, will give long life to the gears and save the owner some annoyance.

Whatever type pump an engine may have, it should be able to supply water in excess, as it is a very easy matter to check it at the sea valve if necessary. In a cruising boat, where the engine is in an enclosed engine room, it is better for the comfort of the engineers to be able to run the engine cool. In a speed boat, when racing to get the best results, it is desirable to run the engine fairly hot, about 120 degrees.

An owner should include in his outfit spare valves if plunger pump is used, and if rotary or gear type it is well to have a duplicate pump to slip in place of the one on the engine, especially if a long trip is planned.

The greatest enemy of the pump is the grit contained in the water, and whether it be a plunger or rotary type pump, grit in the water is bound to have an injurious effect. Cruising boats sometimes have an auxiliary sea valve near the waterline, to be used when navigating in shallow waters, where the lower opening would become choked with sand and mud. A settling tank has sometimes to be installed in the bottom of the boat for the pump to draw from.

Let us now consider the 35 per cent. of heat rejected in the exhaust and means for its proper disposal.

A majority of engine builders at the present time are furnishing with their engines water-jacketed exhaust manifolds, some of them integral iron castings, others built up of steel tubing and malleable iron fittings. This is a great improvement over the custom of some years past of installing an unjacketed pipe and running in a jet of water, which the engineer sometimes forgot to open until it was cherry red, and which, if then opened, resulted in a cracked pipe. A second objection was that the formation of steam in the manifold caused a deposit of moisture on the sparking points through open exhaust valves, when the engine was stopped, causing trouble in again starting. The water-jacketed pipe is well worth the extra expense, and were there no other advantages is paid for in added comfort for those who have to be around the engine when it is running.

The usual method is to pipe the water from the cylinder water outlet pipe to one end of the jacketed manifold and discharge from the other end of same, although it makes little difference how inlet and outlet are located in relation to one another. They may both be at one end of manifold without danger, if more convenient to pipe, as long as the outlet is on top, so the jacket will always be full of water.

There are a number of ways of piping the water after it leaves the manifold. It can either all be put into the exhaust pipe, or only

a jet put in while the main portion goes overboard through a separate pipe. Speed boats, when they have other than atmospheric exhausts, are usually arranged to exhaust through the stern without a muffler in the line. In this case, if the pipe is large and there is no pocket, all the cooling water can be turned into it. If there is danger that the formation of steam may choke the exhaust a jet only can be led in. Either of these arrangements gives a perfectly noiseless exhaust without muffler. When the jet method is used, care must be taken to make it absolutely fool-proof. There should be no valves on either jet or main cooling water discharge, and a stream of water should pass through the jet into exhaust pipe at all times, whether engine is running fast or slow. Sometimes during slow running the water gets away through the main discharge without any passing the jet, or when running hard the back pressure in the exhaust pipe may have the same effect. In this event a little experimenting may be necessary; if the jet does not work properly as first applied, it can be taken from a point nearer the pump where the water pressure is greater, or the size of the jet enlarged. It should be borne in mind that under no circumstances should a valve be put in the cooling water discharge line after it has left the cylinders. Carelessness in starting the engine with valve closed has been responsible for more than one cracked water jacket, the replacing of which took both time and money.

If a muffler is used, either system of piping the water can be used as outlined above, depending on whether or not there is a pocket in the line.

An objection to putting all the water in the exhaust pipe of a boat navigating in salt water is that the deposit of salt on its interior will eventually choke the pipe.

Another point of some moment is the 15 per cent. loss due to friction. In order to obtain so low a percentage of loss, it is necessary to provide an efficient system of lubrication.

There was a time when gravity feed oilers were the rule, but this has been changed, the oiling being now accomplished mainly by means of the forced sight feed oilers. It is unusual to have a feed connection for each cylinder and each main bearing, the cranks being oiled by means of splash with scoops on the connecting rods. An oil pumping arrangement is often supplied to keep oil in the crank-pits at a constant level and take away the surplus which accumulates in the base and which, if not removed, works into the cylinders past the piston, forming carbon.

Speed engines are often supplied with oil rings fed from the lubricator. In such engine it is good practice to have the splash system as well.

(To be continued.)

The Boat Owner and His Friends

By E. T. KEYSER

WHEN J. Chauncey Wiggins saw his first motor boat slide down the marine railway into the water, the idea that loomed largest in his mind was the amount of fun he would have during the season taking his friends out for afternoon runs, and how grandly imposing he would be as a combination skipper and host. He didn't know very much about the gasolene engine, and his ideas on signals and yachting etiquette were vague, not to say a trifle mixed. He did know, however, that he looked well in owner's togs, and he had already made application for membership in the club with the most becoming yachting cap and flying the prettiest burgee.

There wasn't any doubt that he would have plenty of friends to take out with him each time the boat left her moorings, for Chauncey was a popular man. Just how popular he had never realized until after mentioning casually that he was building a motor boat. From that time on his friends were always meeting him, and raw material for future friendships was constantly obtruding upon him; indeed one of the pleasing features of the whole matter was that the nearer the boat approached completion the more friendly everybody became. The interest which everyone displayed in that new boat was touching:

"What kind of cushions was he going to have?"

"How many would she hold at one time?"

"How large was the ice chest?"

"Did he want any help with the engine?" Bill knew all about gasolene motors.

"Did he know the bad spots in the river?" Jim was an expert navigator.

All his married friends made arrangements to invite all their friends to accompany them the first time that they went out with J. Chauncey.

Well, the boat hit the water all right, and hit it in the presence of the multitude of intimate and personal friends of pretty nearly six weeks' growth, the total number of which amounted conservatively to three times the seating and twice the floating capacity of the boat. The way J. Chauncey hustled around explaining matters and arranged that only eighteen people should accompany him on the initial trip would have given him a place near the head of the list of candidates for Ambassador to the Court of St. James if such appointments were arranged on the merit system.

Even though he did his best and invited the whole crowd to meet him later at the yacht club and dine at his expense, there were thirty people with hurt feelings left behind to criticise the manner in which J. Chauncey was handling the wheel. Nobody had an opportunity to say anything unpleasant about the way the engine was managed, because, as a preventive to falling down in public, he had quietly slipped a "V" to one of the mechanics of the boat works to attend to that part of the outfit for the afternoon.

They hadn't gone more than half a mile before one of the guests became thirsty, and after opening the ice box and attending to the duties of host, J. Chauncey found his place at the wheel usurped by a large fat man, who knew so many of the bad places in the river that it really didn't seem a safe thing for a mere amateur like the owner to risk consigning his boat load of joy riders to the chance of being held up on a reef over night.

As an indication of the perils they would have braved had he insisted on steering, the fat man who knew the river thoroughly grounded the boat twice and put three nicks in the propeller, all of which served as a terrible warning of what might have been with less skillful handling.

By the time that all the liquid refreshment on the boat had been consumed, his guests decided that it was time to go home. A long, thin man, who had been making scornful remarks about the fat man's method of navigation, now climbed over everybody in the boat, stepped on the fat man's toes and took the wheel, explaining that he didn't care to steer, but really with all those ladies aboard some one who knew the rudiments of handling a boat ought to make the landing at the float.

J. Chauncey confessed that he was somewhat backward on the aforesaid rudiments, which subsequently appeared to embrace

necessity for fouling two mooring buoys, running over a dinghy and landing with a smash and a crash that put half the float under water and two nicks in the stem band.

Then Chauncey marshaled his forces and spent $48.39 on drinks and ran up a bill at the club restaurant that put him back about a half of his month's salary.

Still it was cheap at the price, he subsequently observed, for if they had continued to navigate that boat much longer there wouldn't have been any boat left.

The next Saturday he tried to square things by devoting the day to the people who had been left behind on the first trip. In the innocence of his heart he had figured he would take a trip of about twenty miles up the river, have lunch aboard the boat and come back in the cool of the evening. It developed, however, that one-half of his guests didn't like the up-river trip, and the other half were just dying to go down the bay and let Chauncey buy them a dinner at some shore resort. By the time matters were arbitrated half the afternoon was over, and just as they had decided to take the latter trip the engine began barking in a peculiar manner, finally lying down and stopping. Investigation showed that an amateur engineer, who thought he needed a little more experience in carburetors, had changed all the adjustments on Chauncey's, and it became necessary to negotiate for five dollars' worth of tow to get back to the boat works where somebody could strike the right combination. By this time it was too late to go anywhere and everybody seemed to be a trifle out of sorts.

By the time the next week came around, it had finally dawned on J. Chauncey that perhaps he was trying to carry too many people at one time, so he limited his invitations to six, which subsequently proved a good thing, because one of the guests brought a friend, another two small children and the third a brindle pup, with a large appetite and an investigating disposition.

What the two children didn't do to the trouble light, the tachometer and signal system wasn't worth doing, and if J. Chauncey had known anything about dogs, the suspicious quiet of that canine for the last two hours of the trip would have somewhat prepared him for the condition of about $40.00 worth of hair-filled cushions which he discovered when making the boat snug for the night.

After dinner that evening J. Chauncey locked his bedroom door, sharpened his lead pencil and consulted some repair, club and provision bills, and then went into executive session with himself. When, two hours later, he emerged there was a look of grim determination on his face and a well mapped out schedule of future proceedings in his mind.

The next week he invited two men to accompany him. He told them just where he was going and how long he was going to stay. He particularly requested that no dogs, children or other undesirable and uninvited people should be added to the list. He made it distinctly understood that he would be very glad to have the people whom he invited come if they would stay in the cockpit and watch him run things, and if they cared to go to the destination which he had chosen.

When, during the afternoon, one of his friends in a moment of thoughtless enthusiasm made a dash for the carburetor, J. Chauncey headed him off half way, and when another kind friend offered to relieve him at the wheel, on the ground that he had more experience with boats than his host, J. Chauncey cheerfully admitted the fact, but added in a manner that could not be misconstrued that while there would probably be a lot of damage done to the boat during the balance of the season, he, J. Chauncey Wiggins, proposed to be the one and only smasher thereof.

Before a month had passed it became known and accepted that anyone who didn't like the grub or drinkables provided aboard that particular boat would not be remonstrated with if he either stayed ashore or supplied the deficiency himself, and that when the White Wings headed for any particular point in the river, any one who discovered en route that he would prefer some other destination was at perfect liberty to get out and walk; and J. Chauncey, having learned the one fundamental rule that the man who owns a boat is the one and only boss thereof, began to understand why such things as lazarettes, leg irons and cat-o'-nine tails usually formed part of the equipment of the old-time clipper ship.

Dixie III Again Wins the Gold Challenge Cup

ONCE more has Dixie III earned the title of Invincible, at least as far as American racing is concerned, by winning the Gold Challenge Cup at Alexandria Bay, August 4th to 6th, racing under the colors of the Frontenac Yacht Club. Throughout the racing she was steered by her new owner, Mr. F. K. Burnham, with her old engineer, Rappuhn, at the throttle. It is a pleasure to see an owner of a speed boat of the highest class handle the wheel himself in important events, and it speaks well for the future of motor boat racing that this position is not turned over to professionals.

The series of races was on the whole somewhat disappointing and of less interest than last year owing to the fact that of the four boats entered but three finished the first day, while on the second day the old reliable Dixie was the only one to finish, the third race being a sail over for her.

There were four boats entered, Dixie III, Squaw, the Thousand Island Yacht Club entry, Skit, a monoplane, and Skipper.

The first race was run in a stiff west wind that kicked up a short choppy sea, which made the going wet for the contending boats. For this reason the race was postponed from four o'clock in the afternoon until six, although at that hour it was blowing just as hard as it had been at the start. The race was a close one between Dixie and Squaw, while the monoplane Skit lagged behind badly. Dixie was never headed and finished the 31 2/3 mile course in the excellent time of 57:14 without showing, probably, the amount of reserve power she had.

SUMMARY, FIRST DAY.

Start, 6 P. M. Course, 31⅔ Miles.

Boat.	1st Round.	2d Round.	Finish.	Time.
Dixie II	6:19:04	6:38:21	6:57:14	57:14
Squaw	6:20:00	6:39:28	6:58:14	58:14
Skit	6:25:11	6:50:20	7:15:45	1:15:45
Skipper	6:21:58	Withdrew.		

On the next afternoon when the time came for the second race, the wind was worse than it had been the day before and none of the spectators expected the start to be made on time. In fact Mr. Burnham and the crew of Dixie were sleeping up to fifteen minutes of the time set for the start, when word was received that the race would be started as scheduled. They were on hand, nevertheless, with Dixie when the gun fired, Skit being the only other contender in the race. In spite of the rough water, the boats were sent away at four o'clock. Dixie finished the first round at 4:21:03, while Skit did not complete the course until 4:23:15, a gain of over two minutes for Dixie. The second round was made in about the same time with Dixie drawing further away, and at 5:04:20 Dixie crossed the finish line with the report of the gun from the judges' boat. Although the committee waited until six o'clock Skit did not finish, one of her cylinders not working properly, besides which she had trouble with her ignition equipment. Thus on the third day Dixie had a sail over, as under the conditions of the race a boat must finish the race to be eligible to start the next day. She covered the course in 57:07, the best time shown in the series.

Motor Boating Among the Florida Tarpon

By HY. GAGE

"EVER CATCH A TARPON?"

"DID you ever catch a tarpon, Pete?" says I to the Florida cracker.

"Not yit, but I know a feller what did onct!"

And that is about as near as I ever came to catching one. I always had a sneaking notion that I'd land a silver king some fine day. But when, some time ago, the motor of my little flat-bottomed fishing boat gave up the ghost in the middle of the deep St. Lucie River in Florida, and a school of these marine monsters commenced playing hide and seek around me, I began to have my doubts.

As they rolled half way out of water, their three or four-inch silver scales flashed back the sunlight like the facets of huge diamonds. It was a fascinating picture, but I would have enjoyed it the more had I been safe on my own dock, rather than drifting helplessly among these powerful fish. To add to my consternation, I saw a dark fin slowly cutting the surface of the water not far off and realized that Hades would break loose in about a minute. With a swoop and a mighty rush the big shark took a hand in the game, uninvited, and he was "it" and enjoying himself immensely.

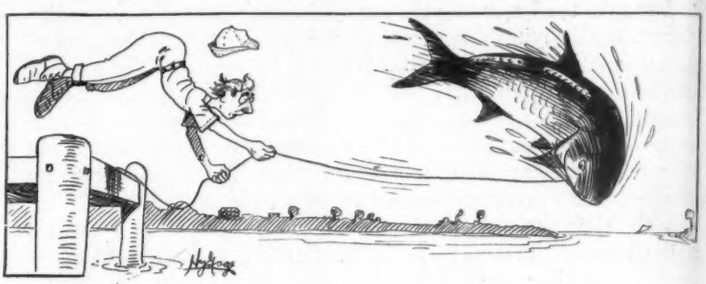
Instantly the water was churned into a mass of foam, the tarpon scattered in all directions and I thanked my lucky stars that none of them had decided to jump into my little craft or knock a few boards out of the bottom of it in their anxiety to make their escape.

When you get a seven-foot tarpon on one end of a line and a five or six-foot man on the other—well, something is bound to happen. I once hooked a seven-and-a-half foot shark from the Sewall's Point dock, but when I put all my weight on the line, Mr. Shark didn't seem to notice it much, but headed for the inlet and dragged me steadily toward the edge of the dock. I put up a "holler" for help and the colonel arrived just in time to keep me out of the drink. Now where would I have been had that been a 50-horsepower tarpon, loaded with nitro-glycerine and possessed of hair-trigger nerves?

The power stored up in one of these fish is inconceivable. There were four of us snoozing soundly in the canopy cabin of a small cruiser anchored in the St. Lucie. It was a snug little cabin, completely fitted with a cruising outfit, bunk room for four, a galley with sink, cupboards, cooking utensils, a dressing cabinet with plate glass mirror and all the conveniences they pack into a two-by-twice space now-a-days.

We were not fishing for tarpon, but had been hoping we might catch sight of one before our cruise ended. Before morning we hoped we would never see another as long as we lived. If someone had exploded a 13-inch shell in the cabin, the crash could not have been more deafening, nor the destruction greater.

There was a wild scramble in the dark to get out of that inferno of a cabin. We smashed into each other. Something



"HAD IT BEEN A 50-HORSEPOWER TARPON ——"

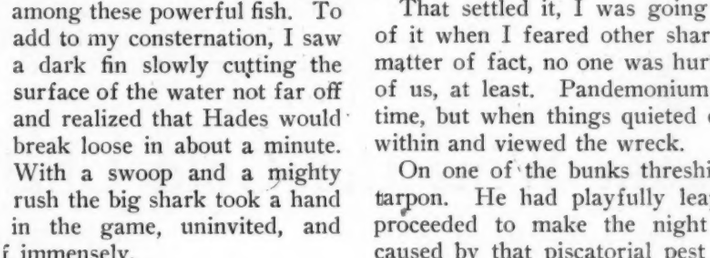
struck one of the boys a sledge-hammer blow on the leg and he yelled: "It's a shark! It bit my leg off!"

That settled it, I was going overboard, but I thought better of it when I feared other sharks might be in the water. As a matter of fact, no one was hurt, but we had the wits scared out of us, at least. Pandemonium reigned in the cabin for a long time, but when things quieted down a little we stuck a lantern within and viewed the wreck.

On one of the bunks threshing wildly about was a four-foot tarpon. He had playfully leaped through the open door and proceeded to make the night hideous. And the destruction caused by that piscatorial pest put a crimp in our finances for some time afterward.

A Miami merchant (name on application, as the medicine ads say) had a mix-up with a school of tarpon that he will not soon forget. He was cruising up the north branch of the St. Lucie when he saw a bunch of these big fish making toward the mouth of a small creek to the west. This creek is quite famous as the spawning ground of tarpon, but the merchant was not aware of the fact and was much amazed to see the whole school head into the creek.

"Now, we'll have some sport," said he, as he drove his motor-boat into the mouth of the creek and turned it broadside across the narrow channel, completely blocking it. Then he reached for his rifle, climbed on top of the open canopy cabin and let drive at a tarpon as it showed above water.



"THEY FLEW LIKE GREASED LIGHTNING."

Well, say! The Galveston cyclone was nothing compared to the storm that broke loose among those gigantic fish. They leaped ten feet in the air, slashed back and forth for a minute or so, and then stam-

peded for the mouth of the creek, at a speed that would make an express train look like a snail.

"Look out!" yelled the merchant. "Drop in the bottom of the boat, quick!" he shouted to his companions.

Instantly the whole school, finding their exit blocked, leaped into the air. Nothing could stop the maddened rush as they flew like streaks of greased lightning over the cabin, over the bow and stern and some of them through the open cabin of the launch. How they ever missed striking the boat is hard to tell, but I think we'll have to give the tarpon credit for knowing what they were about.

Before the days of the motor boat, the tarpon looked more favorably upon the St. Lucie as a place of residence than now-a-days. Sailboats were the only craft then in use on these waters. A veteran fisherman, whom the neighbors had dubbed Izaak Walton, used to sit for hours on one of the St. Lucie docks fishing for tarpon. On the afternoon in question he sat idly toying with his big tarpon reel, hoping against hope for a strike before it was too dark to see. In the gathering dusk he noticed the catboat of the captain creeping slowly toward him. A light, fair wind was barely strong enough to move the boat against the tide at a snail's pace. The night grew black and the fisherman on the dock was about to wind up his line.

"Whee! A strike at last!" he chuckled, and then he heard a splash out in the river.

"Yow! Hear him jump! I'll land you, Mr. Tarpon, if it takes all night!" and then he paid out more line.

By this time the captain aboard the catboat had begun to row, as that was his only hope of reaching home. He watched a light on the shore to note his progress, and his wife did the same. Finally his wife said: "Hezekiah, I do believe we're going backwards!"

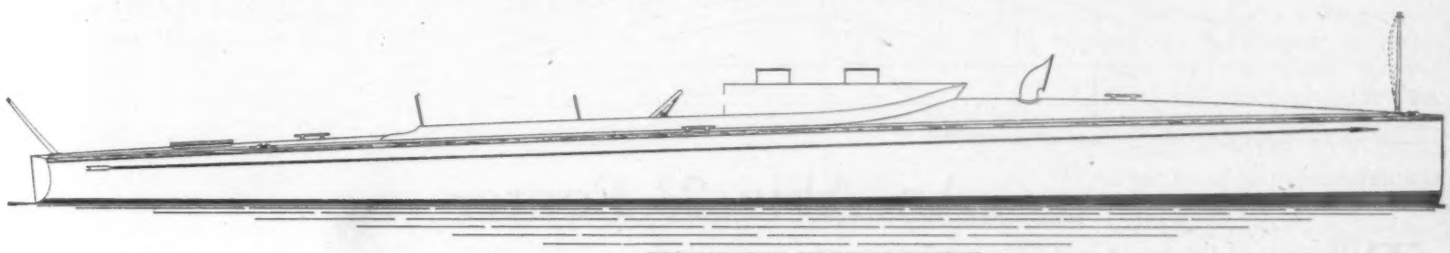
"Rubbish, Abigail!" answered the captain. "I've lived on this river long enough to know when I'm going backwards!"

And so he continued to row.

"Well, I'll be eternally ding busted!" a voice on the dock was heard to exclaim.

"Well I'll be everlastingly dod rotted!" spluttered the captain.

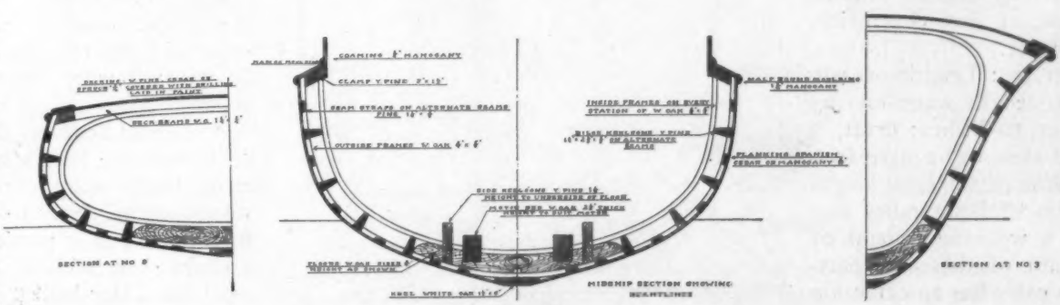
"So you're the tarpon I've been reeling in for half an hour?" ejaculated Izaak Walton.



A 32-Foot Runabout

AMONG the new boats projected for 1911 service is a high-speed runabout, as yet unnamed, designed by Morris M. Whitaker, 1 Madison avenue, New York City, for Mr. F. H. Tucker, of Brooklyn, N. Y., who formerly owned the Macon, a 26-foot runabout with a very good racing record.

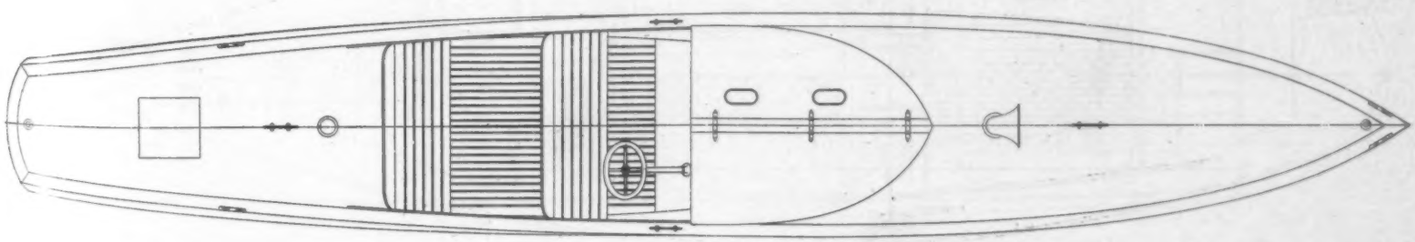
The new boat is just under 32 feet over all, with the waterline length only a few inches less. The extreme breadth is 5 feet 1 inch. The waterline breadth is considerably less, the sides being flared from the bow to abaft of amidship, so as to secure seaworthiness and make a dry boat when running into a head sea. The form of the bottom shows deadrise from the bow to the stern, so as to enable the boat to find her own trim and to lift over a sea.



The construction is interesting in that the longitudinal system of framing has been adopted, the planking being put on with the rib-band carvel form of construction, with every other seam strap made heavy to form a longitudinal stiffener. The transverse framing is light and of only sufficient size to keep the form of the boat true. The hull throughout will be built of Spanish cedar, with canvas deck and mahogany motor cover, covering board, seats, flooring, etc.

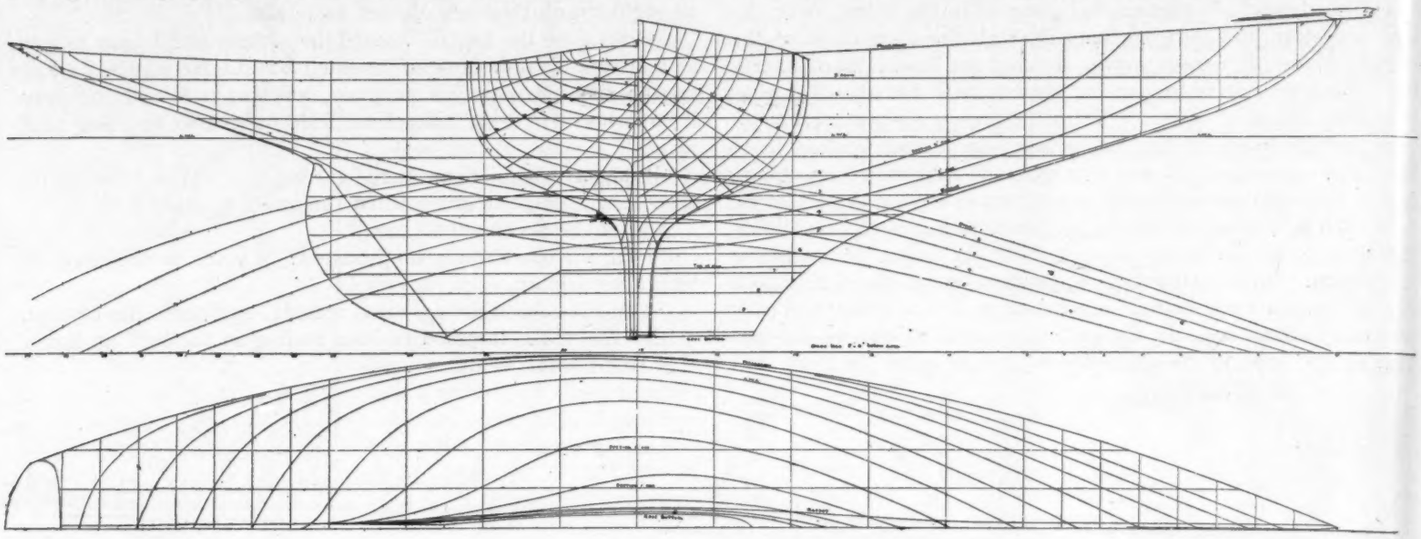
No special attempt has been made to secure the lightest possible hull, although the scantlings have been so proportioned as to keep the weight within reasonable limits, without in any way sacrificing structural strength.

The cockpit has seating accommodations for four people and the boat is entirely controlled from the steering station, the



spark and throttle levers being placed on the steering post as in an automobile, and the motor is arranged to start from the after end. The fuel tank is located under the after deck and the exhaust will be piped through the stern, cutouts being supplied to exhaust through the two short funnels in the motor hood when racing. A bilge pump is to be connected to the propeller shaft so as to keep the boat dry at all times, and the motor installed will be a 4 cylinder 2 cycle, which will give 60 horsepower at not over 850 revolutions per minute.

While designed primarily as a high-speed runabout, she can be considerably lightened for racing, and her form is such as to give her a favorable rating under the racing rules.



An Able 23-Footer

THE plans of the design here reproduced are of interest, as they show the boat which won second prize in the race around Cornfield Light for the YACHTING prize.

The boat is Kenosha II, owned by Chas. W. Voltz, of the New Rochelle Yacht Club, and while designed solely as an able and comfortable little cruiser, she proved to have so good a turn of speed that her owner has raced persistently in the Handicap Class on Long Island Sound with considerable success.

She was designed by Charles Mower, and built by Nock, of East Greenwich, for her present owner.

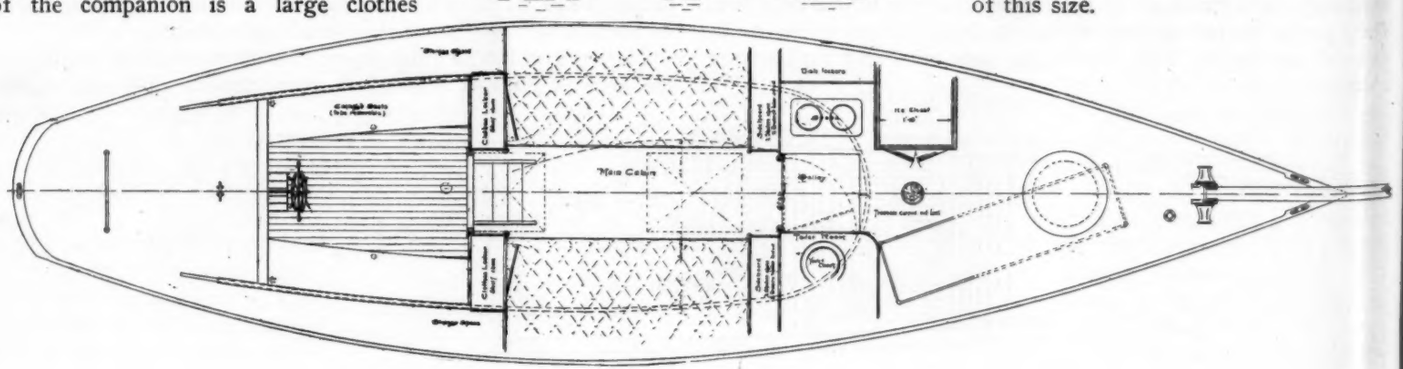
Her dimensions are: Length overall, 34 feet 6 inches; length waterline, 23 feet; beam, 8 feet 10 inches; draft, 5 feet 2 inches; sail area, 627 square feet.

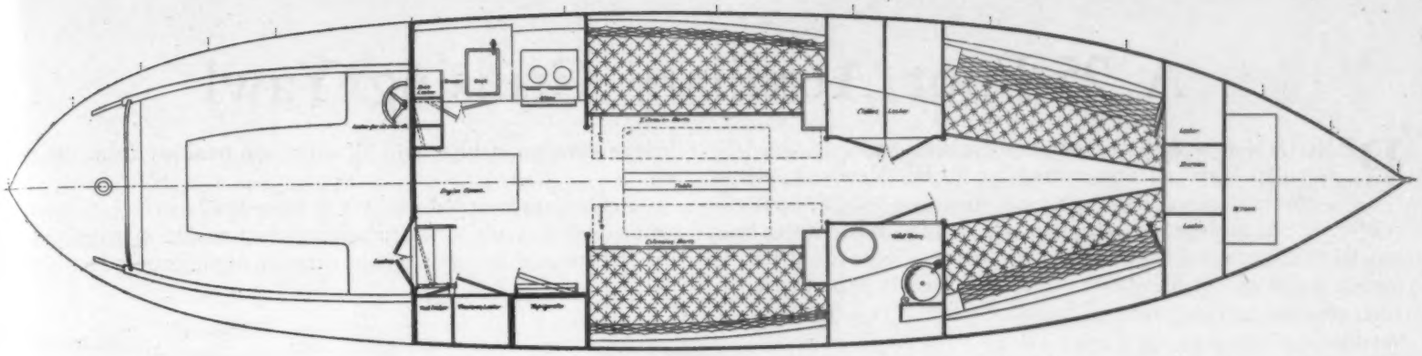
The cabin trunk is of sufficient length to cover a portion of both galley and lavatory, adding a welcome amount of head room to both of these compartments. The main cabin has an extension transom on each side, and is entered by a central companionway. On each side of the companion is a large clothes locker, with a shelf above. The cabin arrangements are such as to give very comfortable cruising accommodations for a party of two, while provision is made for a paid hand sleeping forward on a pipe berth, which is slung on the starboard side of the forecastle, while a large ice chest occupies the after end of the port side.

A large circular hatch leads from the forecastle to the forward deck, and it is possible for the crew to handle moorings, hoist sail, and serve meals without coming aft.

A generous amount of seating space in the cockpit provides facilities for afternoon sailing parties, and these seats may be removed when free cockpit space is desired.

A study of her lines shows that she has very moderate ends with good displacement, being sharp forward, which obviates any tendency to pound in a seaway. Her run is particularly clean and a slight sheer adds to her dryness in a head sea. Her ballast is lead and is all outside. There is also full headroom, which is quite an unusual thing in a boat of this size.

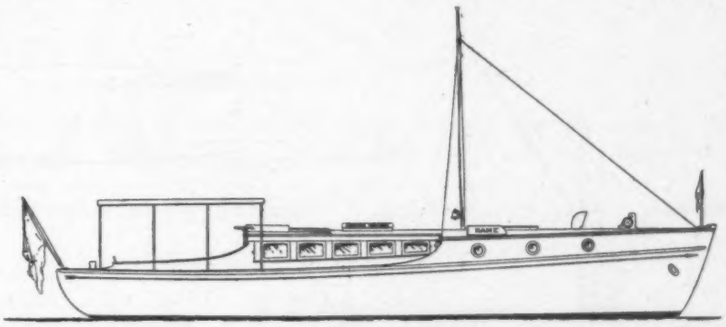




A Forty-One-Foot Cruiser

AMONG the power cruisers of 1910, the Alzada III, owned by Mr. Fred W. Bartels, of Providence, which was launched on July 30, bids fair to stand out prominently as an example of comfort and convenience.

Designed by Frederic S. Nock, of East Greenwich, R. I., she bears the outward and visible signs of inward roominess and real cruiser arrangement that distinguish a Nock boat.



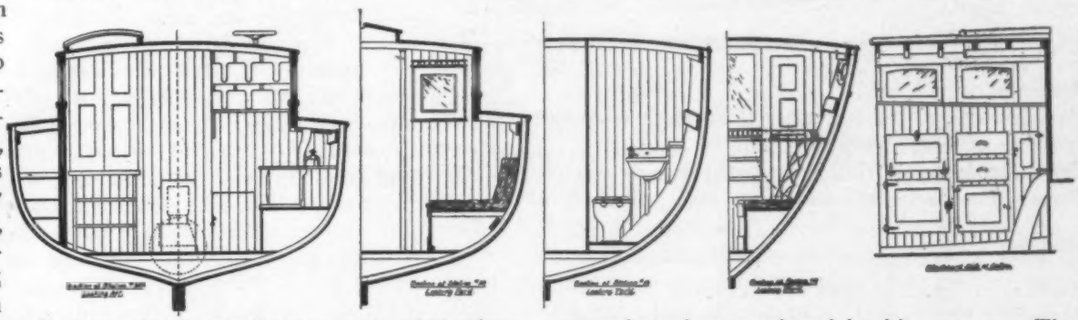
Alzada III is 41 feet overall, 36½ feet on the waterline. Her greatest beam is ten feet, and she draws 36 inches of water at the skeg.

The bow is rounded with a good, deep forefoot, and the stern is of the whaleboat type.

The raised deck extends aft for a distance of 17 feet, at which point a 12-foot raised trunk commences.

The cockpit is 8½ feet in length, with seats running around three sides, with the gasolene tanks under the seats so arranged that they will drain through scuppers overboard.

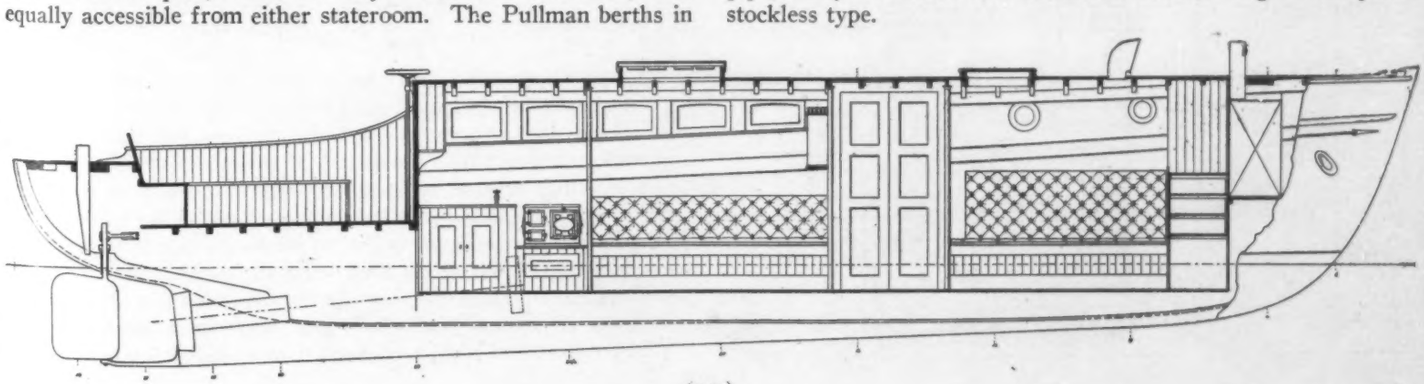
The cabin accommodations are divided into three compartments — a forward stateroom, 6 feet 3 inches long; saloon, 7 feet in length, and the engine-room galley, 5 feet 4 inches in length. The space between the forward stateroom and the fore-peak is taken up by lockers on each side, with a large bureau in the center. Between the two cabins, there are two large clothes lockers on the port, and a lavatory on the starboard side, both equally accessible from either stateroom. The Pullman berths in the forward cabin will accommodate four persons for sleeping.



The after cabin contains two extensions berths, a folding table and two hanging lockers. On the port side of the engine room are dish locker, dresser, sink, and a two-hole Shipmate stove. On the starboard side are the tool locker, provision locker, and refrigerator.

The engine is a four-cylinder, 24 horsepower, 4 cycle, built by the Lamb Engine Company, which gives the boat a speed of 10 miles per hour, turning a 26-inch, three-bladed propeller of 30 inches pitch 500 revolutions per minute. With her comfortable arrangement of cabin space, the deck skylight and large windows in the after cabin trunk, together with her 6 feet of head room under the carlins, she should surely be an extremely pleasant boat for long trips or living aboard during the season. She is so arranged that she may be handled by one man, while a party of eight may occupy her sleeping quarters without getting in each other's way.

The hawsepipes in the bow are characteristic of the modern Nock cruisers; all of the cruisers above 33 feet in length that he has built during the last three years have been equipped in this manner. The handling of the anchors on deck is thus done away with, and the consequent dirt and mud; and the anchors are always in the end of the hawsepipe, ready to release at a moment's notice, being of the patent stockless type.

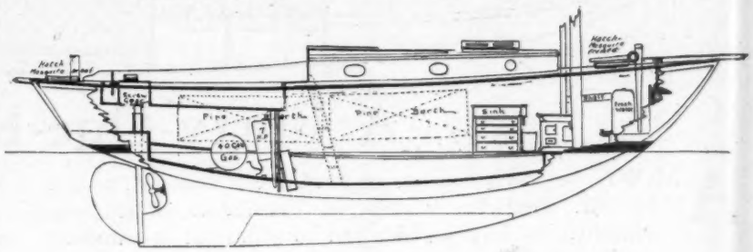


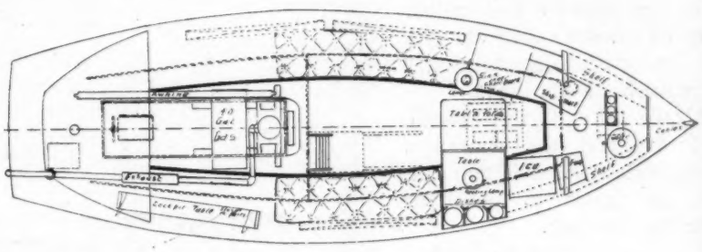
A 25-Foot Auxiliary Cruising Yawl

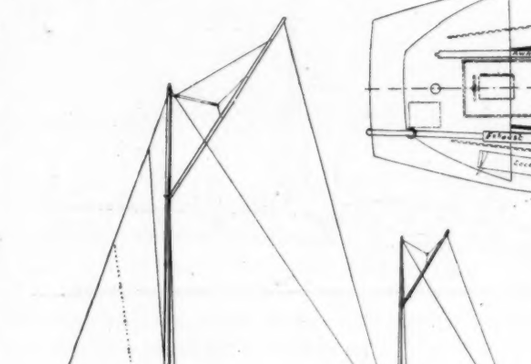
PENGUIN is a 25-foot auxiliary cruising yawl designed by A. T. Marshall and owned by E. W. Kendrick, whose cover designs have pleased so many of YACHTING's readers. She measures 30 feet over all, 25 feet on the water line; has 10 feet beam and draws 4 feet of water. There are 5 feet 10 inches headroom in the cabin. Her sail area is 750 square feet, and she carries 3 tons of ballast, of which two-thirds is outside.

For a boat of her size she provides unusual accommodation for comfortable cruising or for living aboard during the summer, for which she is largely used. The pipe berths running the whole length of the boat provide sleeping accommodation for three, and a transom is left for a fourth party, but, as half the crowd are on deck during the longer trips, three berths are sufficient.

A chart table, with drawers beneath for nautical instruments, etc., proves handy, as one does not wish to clear up for every meal when outside.







At sea or in harbor, when the weather is chilly her Shipmate stove proves itself a true friend. In the daytime good meals can be prepared or at night a cup of coffee, and the cabin is spacious and so arranged that meals may be prepared without disturbing those asleep.

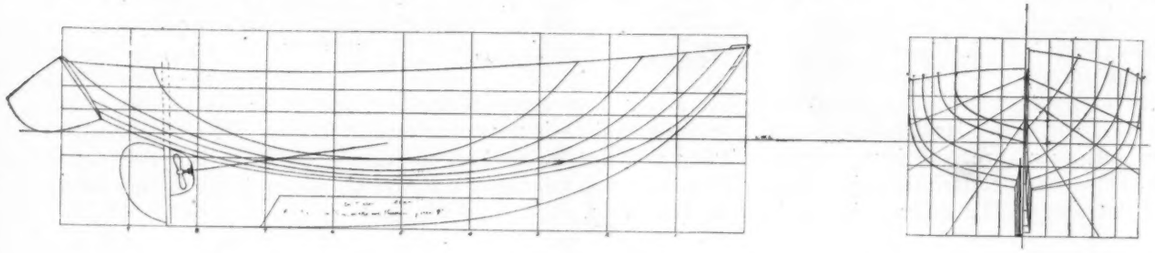
The engine, which is a 7-H. P. Palmer, shoves her along in calms, and has a 40-gallon gas tank rigged aft, which, once filled, needs little more thought for the season. Abaft this, under the cockpit, on one side, is slung the awnings, and on the other the cockpit table, out of the way, yet easily accessible when needed.

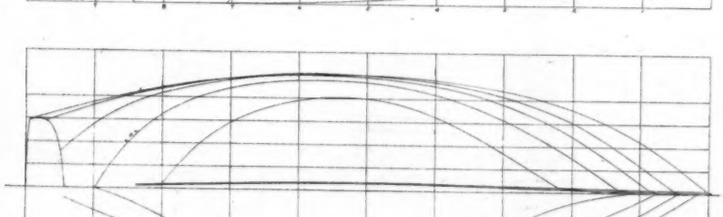
The cockpit is 11 feet long, providing unusual seating capacity, and is self-bailing. The decks are wide and clear; there is a bridge deck amidships, and all ropes are handled from the cockpit.

Anchors are boarded well aft to leave the bow free. Mosquito framed hatches add to the ventilating system and mosquito nets to the comforts of the crew on hot summer nights, and when it blows her high freeboard, yawl rig and sturdy build make her very handy and dry. Penguin makes more speed than at first sight would be expected, and she is a boat that is all deck on deck and all cabin below.

The arrangement below deck is such that engine, with the exception of the flywheel, as well as the gasolene tank muffler and exhaust piping, are all under cockpit floor, leaving the cabin proper entirely free and clear of the auxiliary mechanism.

Penguin is a type of boat which will appeal strongly to those who desire a seaworthy sailing craft, with an easily handled sail spread, and giving rather more than average living accommodation, when it is desired to live aboard for extended periods. She has, in fact, many of the living possibilities of the house boat, with a mobility which only the more pretentious and expensive power house boat offers, and is particularly adapted to the requirements of the fisherman and gunner.



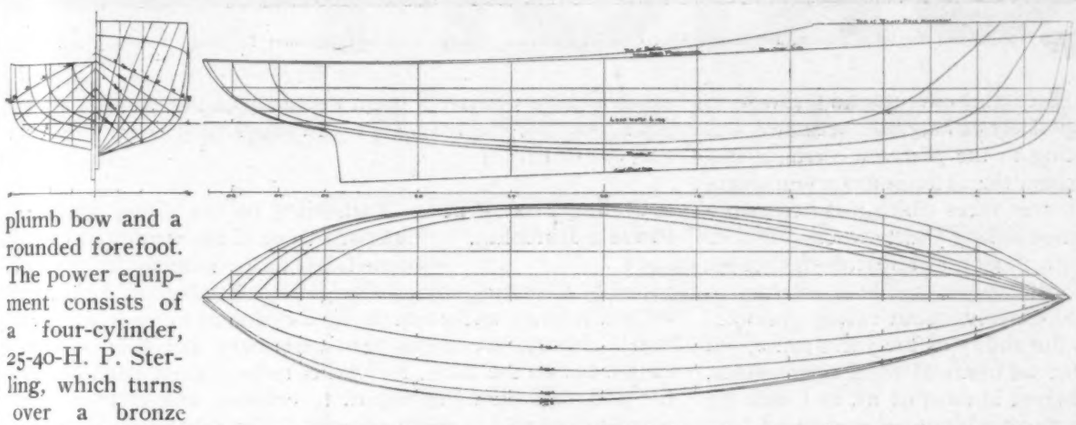


As a base of operation for duck shooting, her generous storage space for supplies and equipment, together with the opportunities which she offers for housing a good-sized party in a well-warmed cabin, makes her nearly ideal; and her owner, who has lived aboard continuously since early spring of the present year, assures us that she has the average summer resort hotel accommodation beaten hands down.

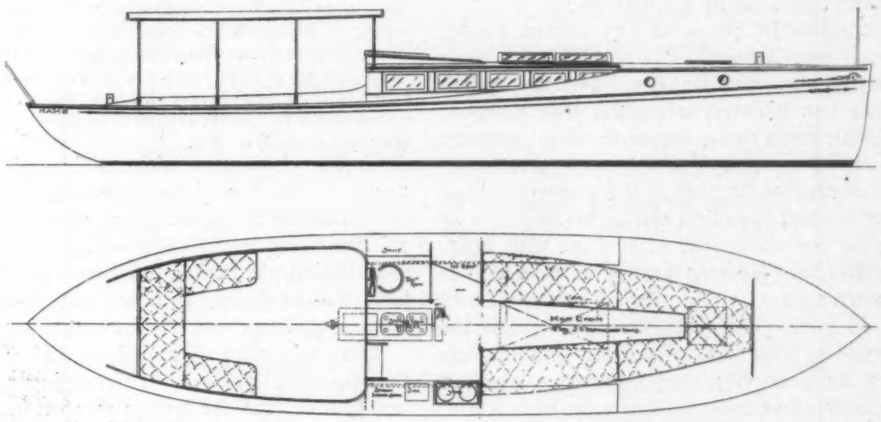
She is big enough to stand considerable weather under sail, yet of light enough draft to allow of her "kicker" pushing her into out-of-the-way bays and inlets where good fishing and shooting may be found. She may be handled with a very small crew and yet accommodate a larger party. Taken all in all, she represents an all around type which may be counted upon to furnish solid comfort and plenty of sport to her skipper and his friends.

A 37-Foot Power Cruiser

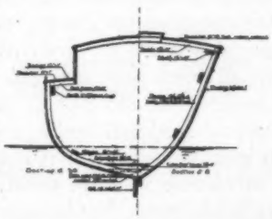
THE Zodiac is a raised-deck and extension cabin cruising launch designed by C. D. Mower for use on the coast of Maine. She is 37 feet 6 inches over all length, 33 feet on the water line, has 8 feet extreme beam and draws 3 feet of water. The hull is of the compromise stern type, with a plumb bow and a rounded forefoot. The power equipment consists of a four-cylinder, 25-40-H. P. Sterling, which turns over a bronze three-bladed propeller 24 inches in diameter and 24 inches pitch, at 600 revolutions per minute, giving the boat a speed of 11 miles per hour.



A study of her accommodation plans shows that, in accordance with the more modern practice, no attempt has been made to subdivide her into a large number of compartments, but, on the contrary, her cabin and engine room are extremely roomy, and, while the main cabin may, by means of a curtain, be divided into two compartments of 6 feet each, they ordinarily form one large compartment 12 feet in length, in which there is 5 feet 2 inches headroom under the beams. The headroom in the cabin was purposely cut down to 5 feet 2 inches in order to allow reducing the height of freeboard sufficiently to make a boat of pleasing appearance. Full headroom of 6 feet is obtained over the greater part of the cabin floor space by the placing of the large cabin skylight so as to give the necessary headroom.



The square hatch forward is intended not only to give ventilation to cabin and access to the forward deck, but is also designed to allow a means of escape from the cabin in the event of a fire in the engine space cutting off escape through the main companionway.



The raised deck extends to just a trifle aft of the center of the main deck, and thence an extension cabin trunk, with large plate-glass windows at the sides, covers the remainder of the cabin space.

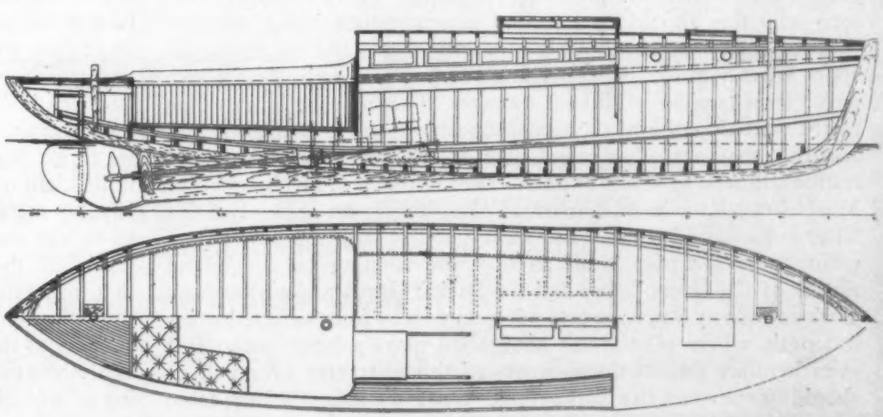
This arrangement gives the combined advantages of dryness and seaworthiness of the raised deck type, and of the light and airiness of the older glass cabin style of construction. The outboard profile shows how the gradual slope of the topsides down to the rail does away with any "boxiness" in the after cabin trunk.

Two large skylights light and ventilate the main cabin, and a large square hatch gives direct access to the forward deck.

The engine room is 5 feet in length, and from the after-port side of this sufficient space has been cut out to accommodate the lavatory. The ice chest is located at the forward port side of the engine room, while stove, sink and a dresser, with lockers underneath, occupy the starboard side, with the companion steps between them and the engine. The after cockpit is 10 feet in length, with a wide, lazy-backed transom across the after end and two short seats at each side.

A side deck 15 inches wide provides a good footway between the cockpit and the forward raised deck. The cockpit, while self-bailing, is low enough to be rather more comfortable than the average, and this at the expense of but a very moderate amount of storage space underneath.

The boat shows the good proportions and the clean-cut lines of hull, and the handsome sheer which marks all the work from the designer's boards. The outboard joiner work is all mahogany, and the builders have turned out an extremely creditable piece of work. She is a good enough little ship to go to sea in when it blows, and is comfortable enough to live aboard of for an entire summer if one is so inclined.



EDITORIAL

Published by the Yachting Publishing Co.; Oswald Garrison Villard, President; Herbert L. Stone, Secretary and Treasurer.

Long Distance vs. Triangular Racing.

Since the advent and growth in popularity of long distance and ocean racing in the past few years, it has become the fashion in certain quarters to decry and belittle the shorter races which had heretofore constituted most of the competition among yacht owners. It does not seem as if this was quite just, though as a matter of fact we fail to see that racing over short courses has been affected in any way by it. For while, undoubtedly, ocean racing promotes seamanship, and adds much to the ability of the yacht sailor, yet shorter racing has its place just as much as the longer events. The spirit of competition is inherent in most of us, and with the very limited time at the disposal of a large percentage of boat owners it is but natural that races that can be sailed in an afternoon should be as popular as they are; besides which we maintain that the ability to handle a boat successfully under the conditions of short triangular racing, with large fleets and crowded turns, also calls for a great amount of skill in seamanship.

While the foregoing applies to the ordinary circuit racing throughout the summer, it would seem as if something a little different should be expected from club cruises, where a specified length of time will enable one to cover a considerable distance and meet conditions different from those encountered in ordinary racing.

The spectacle of the foremost yacht club in the country taking an annual cruise with port to port runs that can be made in five or six hours, and repeating the operation year after year, with boats large enough to race across the Western Ocean, is puerile. It would seem as if the participants would tire of the same old schedule and the same old ports year after year, and yearn for something a little different—at least if they had any salt in their veins. Last year, when an energetic race committee planned something out of the ordinary that took the boats on blue water, a summer gale sent most of the yachts scurrying to port, and the spectacle was presented of 200-ton schooners and 500-ton auxiliaries running for shelter.

The foregoing might apply equally well as regards power boat racing. So far, long distance power boat racing has not taken a very strong hold upon the power boat world, excepting in smaller classes where boats are under 40 feet long. There are many reasons why this should be so, chief among which being the fact that the man who handles his own boat is the one to whom the sport appeals most. The Bermuda Races for motor boats have never been popular with boat owners. This may be largely due to the fact that the navigation proposition scares them off, and also that they are often called upon to compete against boat and engine builders, to whom expense is not so much of an object. The Marblehead Race has degenerated also, largely on account of the latter reason, we believe. Far more popular with the power boat racing men are such races as they are running on the inland waters of the Great Lakes and the Pacific Coast, and as the New York to Albany Race; events of from two to four hundred miles in length, where pilot water navigation plays a large part. But even here we do not think events of this character ever will or should force into the background short distance racing, from which one may derive a great deal of pleasure on an afternoon. And, after all, the reason a man owns a boat is for the fun he gets out of her.

A Ruling That Will Prove a Hardship.

Yachtsmen on the Great Lakes, and especially those in the vicinity of Chicago, were taken aback recently by the ruling issued by Commissioner of Navigation Chamberlain, on the existing law relating to the entering and clearance of vessels from lake ports. Heretofore it has been customary, not only on the sea coasts, but on the lakes, for yachts to be exempt from observing the port regulations in regard to entering and clearing, except when bound to a foreign country. The substance of the commissioner's ruling is as follows:

The Collector of Customs at Chicago is in receipt of a new ruling by Commissioner of Navigation Chamberlain, at Washington, affecting pleasure yachts which will be of vital importance to yacht owners. Pleasure craft which are required to be documented should be enrolled and licensed the same as trading vessels when not proceeding to the seacoast. The new ruling is that pleasure yachts are required to report and clear the same as trading vessels. Formerly pleasure craft received yacht licenses which exempted them from reporting and clearing at lake ports. It is important that yacht owners observe this new ruling, because the same penalty will be imposed for its violation as is now levied upon commercial vessels for non-observance of this rule.

If it is the commissioner's intention to force all documented yachts to enter and clear the same as a coasting vessel, it seems to us that he is imposing an unnecessary hardship on those who sail for pleasure. We do not know the underlying reason for the commissioner's ruling, but knowing his attitude we cannot believe that he desires to force any unnecessary regulation or hardship on yacht or motor boat owners.

The yachtsmen of the Great Lakes have taken action to have the obnoxious portions of the ruling repealed. Personally, we do not believe that the ruling was meant to affect yachts bound on pleasure cruises between American ports, and if the rule is ambiguous on this point, we think it will be changed upon its being brought to the commissioner's attention.

No Sectional Differences.

Some time ago there appeared in some of the New York newspapers an article emphasizing the fact that sectional differences in the motor boat world were rampant, preventing the best development of the sport in a national sense. In proof of this they quoted the fact that it was impossible to get Eastern boat owners to race against Western boat owners and *vice versa*. While there is undoubtedly a certain amount of sectional feeling, it amounts to hardly more, we think, than local pride, and it is not stronger than is manifested in baseball or any other form of sport, when two sections of the country meet. While there has been some differences of opinion as to the measuring rules and methods of racing between the East and the West, we do not think it is any sectional feeling that keeps the boats of the two sections from meeting, but rather the difficulty of transporting racing craft from one portion of the country to the other, where most of the handling would be necessarily left to the tender mercies of the railroads, and to the finding of suitable dates that would not conflict with local events.

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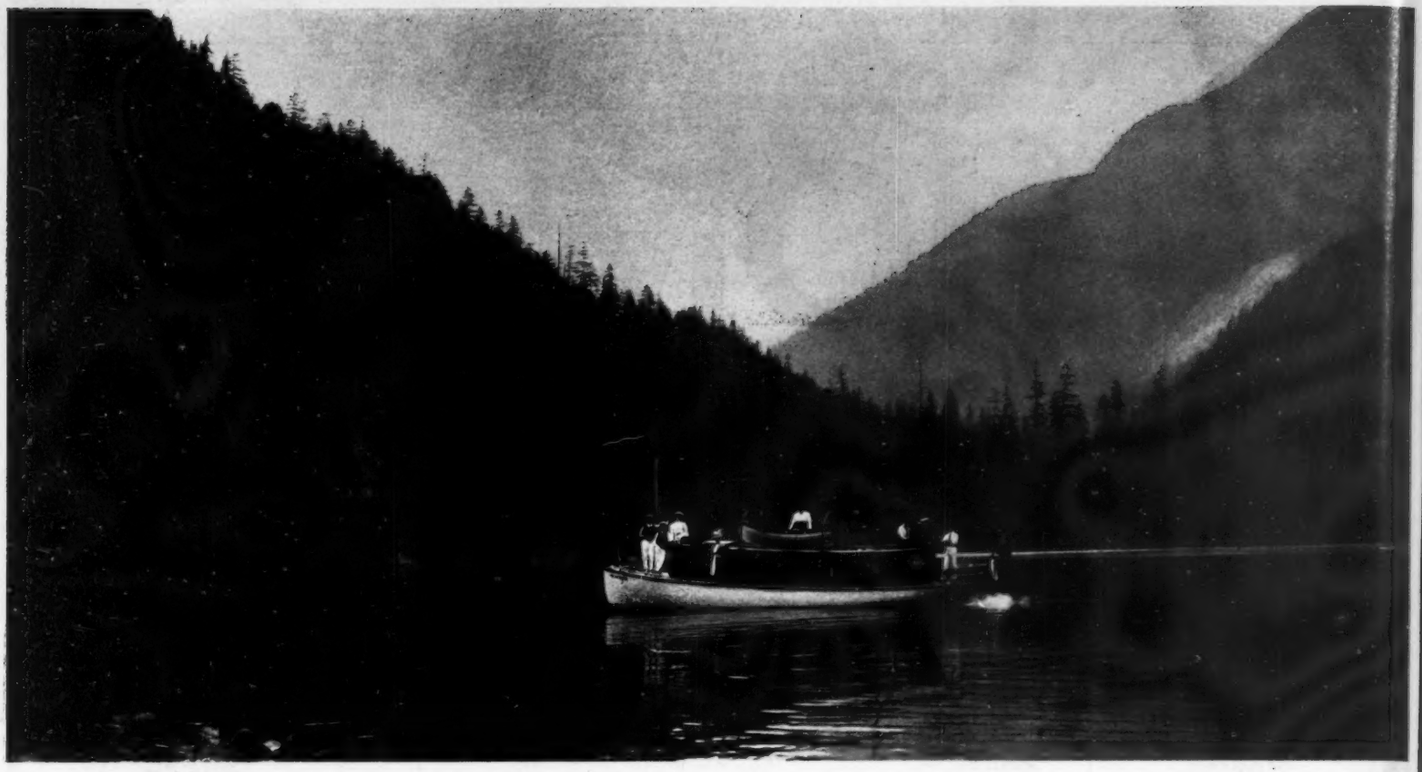


ON THE NORTH ARM NEAR VANCOUVER, BRITISH COLUMBIA.

Driftwood from Along Shore

From Puget Sound

A NEW YACHT CLUB OF GREAT PROMISE

Vancouver has been known to the yachting world for some time through the activities of the Royal Vancouver Yacht Club, an organization which has done much to foster the sport in the extreme Northwest. The club house of this organization was destroyed by fire last fall, but a new building of even greater beauty has been erected in Stanley Park to replace the old one, and the club continues to thrive with a large membership and a considerable fleet of both sailing and power yachts. Within the past two years, however, the city of Vancouver has grown so rapidly that its limits have been extended to an almost uncreditable degree. The municipality of North Vancouver, situated 2 miles across from the mainland, has shared this growth, which extends up both sides of the North Arm, a beautiful inlet penetrating the hills which surround the thriving city. To get to the business places and homes, which have sprung up as if by magic along this beautiful waterway, the building of a large fleet of motor crafts and yachts has been necessary. To this fleet the municipality of North Vancouver offers a more convenient center than the older community in Coal Harbor, which accounts for the formation last winter of the North Vancouver Yacht Club.

One of the originators and most enthusiastic members of the new club was Capt. C. H. Cates, a man of varied activities and interests along the coast of British Columbia. At the beginning of the yachting season this year, Capt. Cates offered a valuable trophy for a race to be run yearly somewhere about the first of June. His idea was to encourage an early opening of the yachting season, and to get the Canadian boats tuned up for the annual long-distance race of the Pacific International Power Boat Association, which took place on Puget Sound early in July. This race was held on June 4, and brought out nine entries, eight of which started. Of these starters all but one finished the 60-mile course without a stop of the engine. Although these boats were of the cruiser type it was decided to hold the first race on an inside course, one lap being from the North Vancouver Yacht Club's float to Crocker Island, a distance of about 18½ miles up the North Ann. The entries were handicapped upon the measurement rating of the Pacific International Power Boat Association, which is similar to that of the American Power Boat Association. Various types were represented, but interest centered about the appearance of two new boats just turned out from the boards of A. J. C. Robertson, a marine architect of old-country experience, and measurer of the yacht club. To give an idea of the character of the fleet it will be interesting to run briefly over the list of entries in the order of their rating.

Kathleen N is a glass cabin launch owned by J. S. Hoffar, of North Vancouver.

Gadabout is a neat little trunk cabin cruiser belonging to Capt. McMillan, of North Vancouver, which has been used for thousands of miles of cruising in and around Puget Sound.

Vina, the property of P. Anderson, of North Vancouver, is a 40-footer of the full glass cabin variety, which has also done a great deal of cruising.

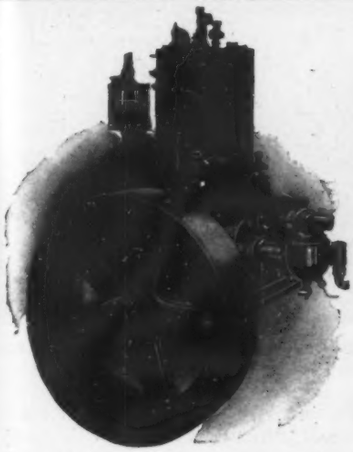
Ysidro, belonging to W. S. Buttar, is one of the new boats spoken of. She is a raised-deck trunk cabin cruiser of considerable draft in the 'midship section, but drawing out to a very sharp cutter stem. Her stern is of the broad Norman type with plenty of bearing. In addition, she has an unusually large cockpit, which affords a comfortable lounging spot for day cruising. Her sleeping accommodations are ample, however, for extended journeys. She is powered with a 20-horsepower motor.

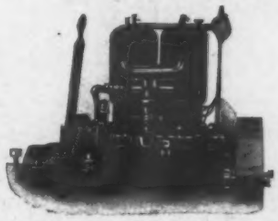
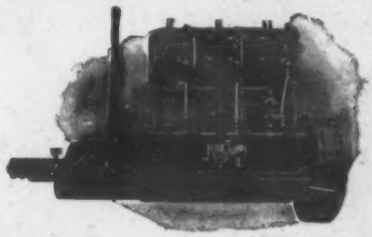
Elola is a 50-footer, owned by Evans B. Dean, who has won considerable repute as skipper of the Fyfe-design international champion Alexandra. As a power boat man Mr. Dean displayed the same qualities which distinguished him as a yacht sailor. His conversion to power boating is significant of the great change in sentiment which has come over the community on this subject.

Bachelor, entered by F. D. Hueston, of Vancouver, was the only one to suffer seriously from engine trouble, being obliged to withdraw on the last lap.

Eleanor, which was built by W. W. Gilmour, of North Vancouver, for Vice-Commodore J. J. Woods, of the new club, is the other new boat referred to. She is what might be called a compromise day cruiser. She has remarkable speed lines, although her performance during the race does not show what she was capable of, as her engine had been installed only the day before, and no attempt had been made to ballast or trim the boat. Eleanor represents designer Robertson's idea of a fast family boat. She has a bow and stern similar to those of the Ysidro, but her draft is much shallower, lessening her wetted area to a remarkable degree. With her 15-horsepower engine Eleanor has developed since the race a speed of nearly 12 miles.

Limit, which fittingly took the position of scratch boat, is known up and down the British Columbia coast as an ideal cruiser. Her former owner, E. L. Kinman, vice-admiral of the Pacific International Power Boat Association, has recently disposed of her to a syndicate headed by A. W. Le Page, of Vancouver, who will enter her in the association's race from Alaska, which leaves Ketchikan August 15 for Seattle, a non-stop event of about 750 miles. Limit is one of the few twin-screw boats in these



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LAKE CHAMPLAIN
Plattsburgh — Rouses Point — Burlington, Vt.
Westport — Ticonderoga — Whitehall

CONNECTICUT
Greenwich — Stamford — South Norwalk
Bridgeport — New Haven — Stony Creek
New London — Cos Cob — Noank
Stonington — Rowayton — Mystic

RHODE ISLAND
Newport — Providence — Pawtuxet
Wickford — East Greenwich — Bristol
Warren — Narragansett Pier — Block Island

MASSACHUSETTS
New Bedford — Nantucket
Fall River — Oak Bluffs
East Boston — Vineyard Haven
Dorchester — Newburyport
Buzzard Bay — Hyannis
Provincetown — Kingston
Lynn — Salem
Gloucester

NEW HAMPSHIRE
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MAINE
Portland — Kennebunkport — Rockland
Bath — Belfast — Eastport

OLD LAZY BONES, A GOOD LANDMARK FOR THE HELMSMEN.

NORTH ARM, FROM THE PINNACLE OF COVE CLIFF.

COVE CLIFF BEACH, A COZY NOOK TO ANCHOR FOR THE NIGHT.

waters, and has demonstrated beyond question her ability as a speedy and seaworthy cruiser.

A summary of the race, which follows, will present an interesting study to the man who finds pleasure in statistical details:

	L.O.A.	L.W.L.	W.L.B.	Eng.	H.P.	Rev.	Midship Area in Sq. Ft.	Rating.	Start. H. M. S.	Finish. H. M. S.
Kathleen N.	33′ 6″	28 9″	7′ 6″	Camp...	12.4	371	9.13	34.9	10 0 7	5 0 10
Gadabout	25′ 7½″	23′ 11½″	6′ 7″	Palmer..	10.3	480	6.85	35.0	10 3 2	5 12 15
Vina	40′	3.′ 3½″	9′ 5″	Easthope	14.6	422	10.	37.6	10 19 40	5 13 8
Ysidro	40′	38′ 9½″	8′ 5″	Gardner.	15 19	525	10.2	37.8	10 20 30	4 30 5
Elola	50′ 6″	49′ 3″	9′ 8″	Automatic	20.57	328	14.5	38.7	10 26 33	4 56 58
Bachelor	36′ 4″	25′ 2″	7′ 9½″	Lamb...	17.2	408	10.2	38.8	10 26 30	Withdrew
Eleanor	36′	35′ 3½″	7′ 7″	Gardner.	15.18	700	4.49	49.1	11 20 40	5 28 53
Limit	51′ 1″	49′ 5″	9′ 5½″	Ralaco..	50.0	471	15.65	50.8	11 26 57	4 41 0

Not only along the lines of motor boating has this new club displayed activities, but it also includes in its membership a number of enthusiastic devotees to canvas. This fact has led to the formation of a sailing dinghy class similar to those raced on the Canadian lakes and in the old country. The club has four of these boats, which race with each other and with the boats of the other clubs belonging to the British Columbia Dinghy Racing Association. This last organization also sprang into existence last winter, and hopes to aid in the re-establishment of cordial relations between the Canadian and United States sailing men by the starting of this popular one-design class. Already a movement is on foot in the cities of Puget Sound to follow the example of the British Columbians. The four dinghies of the club are: We-Two, owned by F. C. Brewster; Jumbo, owned by John H. Wrigley; Ethel, owned by Mrs. Frank Nichol, and Flea, owned by Mr. R. W. Day.

F. B. FOULSER.

Delavan Lake Yacht Club Regatta

On July 21, 22 and 23 the Delavan Lake Yacht Club held its fifth annual invitation regatta on Delavan Lake, Wis. Only Class A boats of the Inland Lake Yachting Association were eligible. Class A is the 38-foot over-all scow type, considered the speed marvel on the inland lakes of the mid-West.

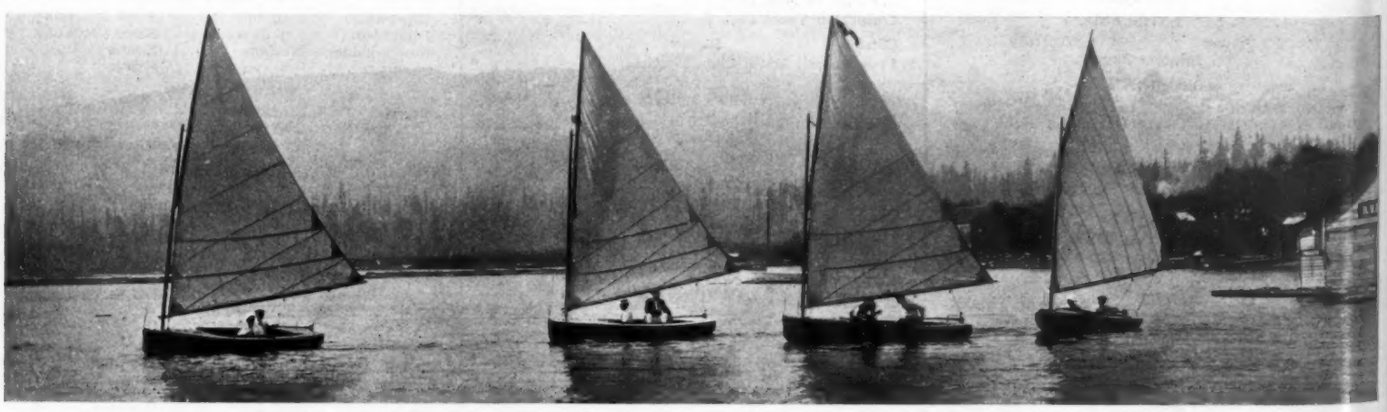
During the last five years the Delavan Lake Yacht Club, acting as the host, has annually invited the rival yacht clubs of neighboring lakes to participate in this special feature of their season's programme. Owing to the fact that in the past the racing in this event has been fast and exciting, the Oconomowoc Lake Club and the Geneva Lake Yacht Club sent their fastest boats over to compete for the honors. Five races were scheduled, and figuring the results of each race on a percentage basis the prizes were awarded to the boats having the highest totals.

Twelve skippers reported to the judges, and the fleet was made up as follows: Comet, from Oconomowoc, formerly the Skeetie, "skipped" by D. W. Buchanan; Handy Andy 3d, a new Johnson boat from Oconomowoc, Lester Armour, skipper; Black Point, with the owner, Dr. O. L. Schmidt, at the stick; Patricia, Geneva 1st and Geneva 2d, the latter being a new boat built from a late Mower design, all came from the Geneva Lake Yacht Club. The home club entered Bruno, a new Palmer creation, "skipped" by Elmer Stevens; Ameta; Natalie; Oaksae 2d, a new Amundsen boat; El Capitan 2d, and White Heather.

JULY 21, A. M.

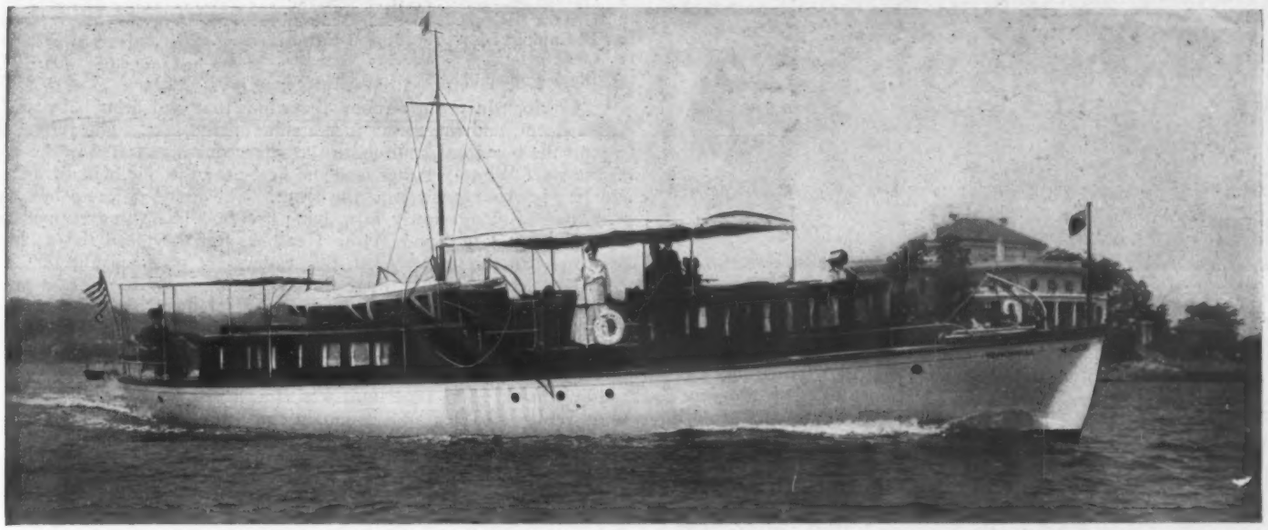
All entries having reported at 10 o'clock, the judges decided that the course would be the double triangle, from the yacht club to Island mark, to Highland mark, to yacht club, to Kennelworth mark, to Lake Lawn mark and return, finishing at the yacht club. A fresh, full-sail breeze from the S. W. kicked up a fair sea, and a cloudless sky made the conditions ideal. The first leg was to windward, and with the starting gun at 10:30 o'clock the fleet went over the line, well bunched, on the starboard tack. After sailing about a quarter of a mile the boats started splitting tacks, and as they worked back and forth to windward, close together, the judges were kept on the alert watching for possible fouls. Comet and Handy Andy 3d sailed through the fleet and slowly pulled out ahead, with Ameta following. At the windward mark Comet was first, with Handy Andy 3d close up, while Ameta broke the gap between the leaders and the rest of the boats. On the run to the next mark all broke out reaching spinnakers, and as they lined off down the lake, traveling fast, the spectators got their first treat of the regatta. Comet and Handy Andy 3d widened the distance between them and the rest of the fleet, with Ameta holding on to third position. Geneva 1st, Black Point and Geneva 2d kept up a lively fight for fourth honors, which the Black Point would have secured but for a mishap in housing a head sail.

	Boat.	Club.	Points.	Elapsed Time
1	Comet	Oconomowoc	12	0:56:20
2	Handy Andy 3d	Oconomowoc	11	0:57:00
3	Ameta	Delavan	10	1:00:00
4	Geneva 1st	Geneva	9	1:00:20
5	Black Point	Geneva	8	1:00:30
6	Geneva 2d	Geneva	7	1:00:40
7	White Heather	Delavan	6	1:03:00
8	El Capitan 2d	Delavan	5	1:03:06
9	Bruno	Delavan	4	1:03:10
10	Patricia	Geneva	3	1:03:15
11	Oaksae 2d	Delavan	2	1:08:00
12	Natalie	Delavan		Did not finish.



DINGHY CLASS OF THE NORTH VANCOUVER YACHT CLUB.

THE APPOINTED TIME



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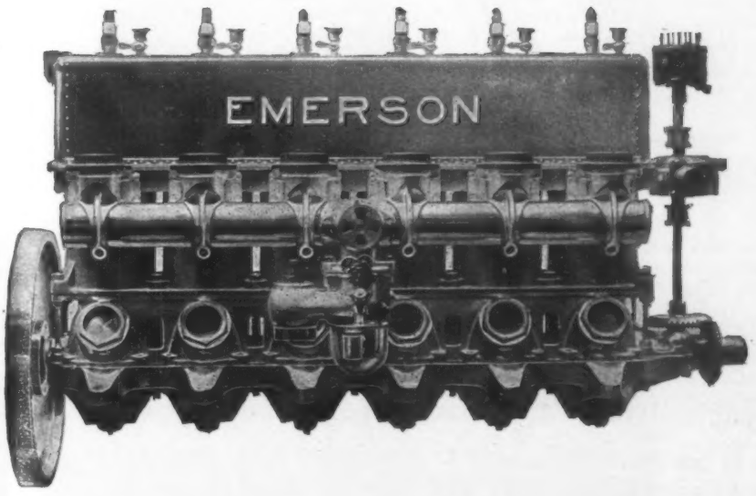

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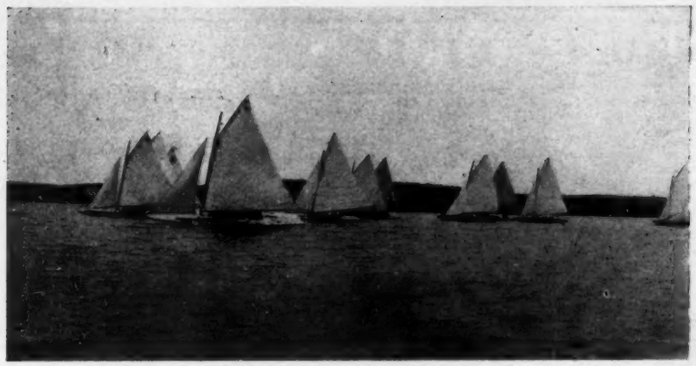


START OF CLASS A AT DELAVAN LAKE REGATTA, JULY 21.

The wind was in the same quarter for the afternoon race, but had freshened a little, making it a full-sail hiking breeze. The judges announced the course to be the same as that of the morning, with the second triangle reversed. At 3:15 the boats went over the line *en masse*, with little to choose among the first five or six. As soon as possible they split tacks and a repetition of the morning's windward work resulted. Comet and Handy Andy 3d were battling hard for the lead, and as they turned the mark Comet was first, with Handy Andy right at her stern. Ameta was again in third place. Black Point rounded fourth, with the other Geneva boats close behind. Bruno took a desperate chance and nosed in close, and rounded ahead of four boats that were taking the mark a little wide. The leaders held their positions, but Comet could not shake off Handy Andy 3d. As the boats rounded the last mark Handy Andy 3d caught a strong puff that carried her down on Comet, who had to give her buoy room, and in so doing lost the lead to the Armour boat. On crossing the line Lester Armour, skipper of the winner, received a flattering ovation. He was the youngest skipper in the regatta, being only fifteen years old.

	Boat.	Club.	Points.	Elapsed Time.
1	Handy Andy 3d	Oconomowoc	12	1:00:50
2	Comet	Oconomowoc	11	1:01:30
3	Ameta	Delavan	10	1:03:33
4	Geneva 1st	Geneva	9	1:05:03
5	Geneva 2d	Geneva	8	1:06:20
6	Bruno	Delavan	7	1:06:25
7	El Capitan 2d	Delavan	6	1:06:35
8	Oaksae 2d	Delavan	5	1:06:42
9	Black Point	Geneva	4	1:06:55
10	Patricia	Geneva	3	1:08:05
11	Natalie	Delavan	2	1:08:10
12	White Heather	Delavan	Broke jib halyard, withdrew.	

After this race it looked as if the Oconomowoc boats were the fastest in the fleet and the only serious contenders for first honors. There were four or five new boats that had shown no remarkable speed whose skippers started in the regatta with great confidence. These same skippers were now busy, trying to figure out where their boats were lacking. Many changed sails, bilge boards and rigging in the hope of increasing speed and getting within striking distance of the fast ones.

The visiting crews and yachtsmen were entertained at the club house in the evening at a smoker. Much weed was burnt and many races resailed before the tired tars hunted up their bunks.

JULY 22, A. M.

Overcast skies and pouring rain greeted the early arrivals at the club. As it neared starting time the rain subsided and a little breeze sprang up out of the west. At 10:30 o'clock the cannon started them off in the third race over the same course sailed the previous afternoon. The first leg looked like a beat. After making a couple of short tacks the wind shifted, and the boats were on a close reach to the first mark. The wind acted fluky, and in trying to point up some of the boats had their mainsails flattened down too closely, which had a damaging effect upon their speed. At this stage of the race the wind proved a joke to all but the group of five or six boats that were making up the second section. It seemed to come from all quarters, and always favored the first boats. Then to add to the discomfort of the trailers the rain poured down. The first four boats practically sailed around the entire course on a reach, while the balance of the fleet had to tack to make all but two of the marks. Comet was always in the lead and gained on every leg of the race, winning in easy style.

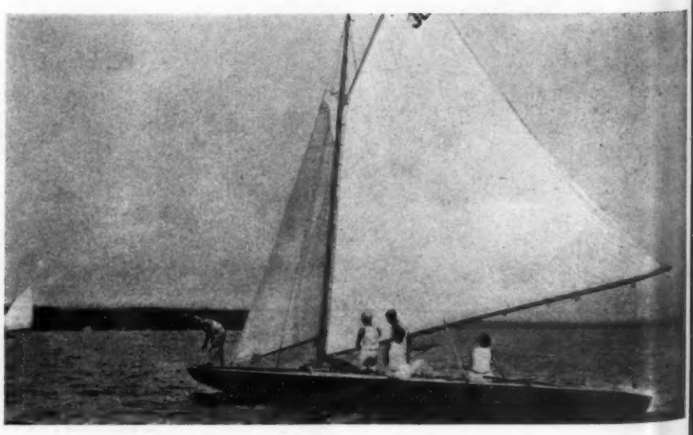
	Boat.	Club.	Points.	Elapsed Time.
1	Comet	Oconomowoc	12	1:36:40
2	Bruno	Delavan	11	1:53:37
3	Handy Andy 3d	Oconomowoc	10	1:53:40
4	White Heather	Delavan	9	1:58:32
5	Ameta	Delavan	8	2:01:20
6	Natalie	Delavan	7	2:02:30
7	Patricia	Geneva	6	2:05:18
8	Oaksae 2d	Delavan	5	2:06:21
9	Geneva 2d	Geneva	4	2:06:55
10	El Capitan 2d	Delavan	3	2:09:58
11	Geneva 1st	Geneva	2	2:12:48
12	Black Point	Geneva	1	2:13:36

At 3 o'clock in the afternoon the wind, that had been fluky and fickle, flattened out, and there was just a riffle on the lake. The judges decided to send the boats out, and chose the same course as sailed in the morning. At the start White Heather lead the fleet over the line, with Bruno, Comet and Handy Andy 3d well to the front. The first leg was a beat, and the boats moved along slowly in a dying breeze. The going seemed to be to the liking of Bruno and White Heather, and they lead the drifting procession down the lake. When the leaders got within a quarter of a mile from the mark the wind died out completely, and the fleet seemed to be riding at anchor. The spectators on the steamers and launches, like the sailors, were praying for a wind. The only redeeming feature was that the clouds prevented the sun from shining through and adding to the torture. Finally a "breezelet" sprung up, and some of the boats got around the first mark. The time limit was almost up, and the race was called off, with White Heather and Bruno in the lead.

JULY 23, A. M.

A blue sky and fresh, steady wind out of the south gladdened the hearts of the sailors and spectators as all assembled for the final race of the meet. The judges picked out a long course—from the yacht club to Island, to yacht club, to Kennelworth, to Lake Lawn and back to yacht club, twice around the triangle. It certainly was a beautiful sight to see twelve large Class A's start off to windward with their lee rails awash and the boys with the white Jackey suits hanging over the weather bilge. Comet assumed her old place and took the lead with Handy Andy 3d second and Geneva 2d third, and the rest of the fleet chasing them hard. The leaders rounded the windward mark in the position named. White Heather was here disqualified for a foul on Patricia. To make the second mark the boats had a spinnaker run. The race down the lake before a ripping breeze, with all head sails set, was very spectacular. The race between Handy Andy 3d and Bruno for second place held the attention of the gallery, as Comet was far ahead and increasing her lead. In beating to windward, just before making the home mark, Bruno luffed too far, in a strong puff, and hit Handy Andy 3d, and was later disqualified by the judges, as Handy Andy had an overlap on her. The judges were absolutely right, but it seemed like a hardship on Elmer Stevens, skipper of Bruno, as a foul of this kind generally is an accident and hard to prevent when two boats are close, going to windward in a heavy sea. Black Point showed remarkable speed to windward and was well handled, finishing third.

	Boat.	Club.	Points.	Elapsed Time.
1	Comet	Oconomowoc	12	1:15:13
2	Handy Andy 3d	Oconomowoc	11	1:28:24
3	Black Point	Geneva	10	1:30:36
4	Ameta	Delavan	9	1:30:42
5	Geneva 1st	Geneva	8	1:33:05
6	Geneva 2d	Geneva	7	1:33:45
7	Patricia	Geneva	6	1:36:10
8	Natalie	Delavan	5	1:37:13
9	Oaksae 2d	Delavan	4	1:37:25
10	El Capitan 2d	Delavan	3	1:46:00
11	Bruno	Delavan	0	Foul.
12	White Heather	Delavan	0	Foul.



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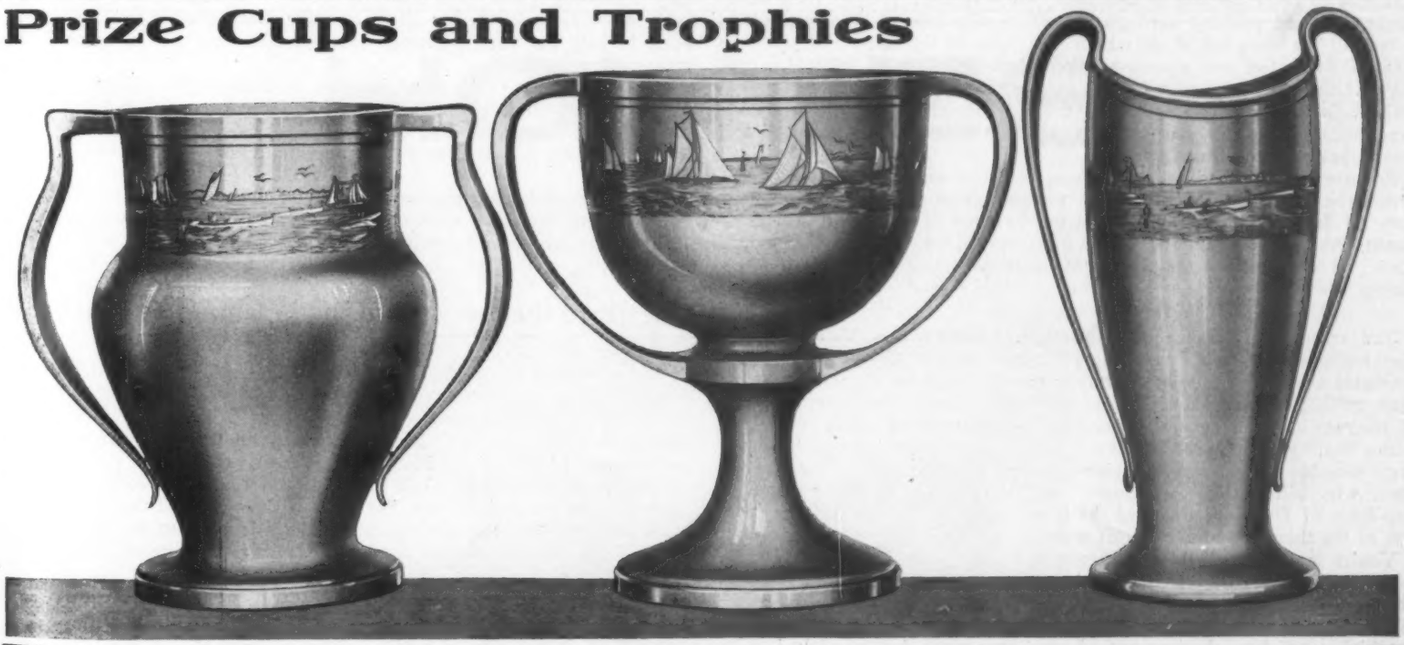

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Comet received the first prize silver cup, for the series, Handy Andy 3d second, and Ameta third. The final results and standing of the boats in the regatta is as follows:

FINAL STANDINGS

	Boat.	Club.	Total Points.	Skipper.
1	Comet	Oconomowoc	47	D. W. Buchanan.
2	Handy Andy 3d	Oconomowoc	44	Lester Armour.
3	Ameta	Delavan	37	Robert Sage.
4	Geneva 1st	Geneva	28	James Holden.
5	Geneva 2d	Geneva	26	Charles Goepper.
6	Black Point	Geneva	23	Dr. O. L. Schmidt.
7	Bruno	Delavan	22	Elmer Stevens.
8	Patricia	Geneva	18	Marquette Healy.
9	El Capitan	Delavan	17	Dr. Noyes.
10	Oaksae 2d	Delavan	16	Louis Kuhnert.
11	White Heather	Delavan	15	Robert Hughes.
12	Natalie	Delavan	14	Dr. Kellogg.

J. PAUL DUNNE.

From the Jersey Coast

LONGPORT YACHT CLUB

Never before in the history of the club has there been a season to equal the one now drawing to a close. It is now beyond doubt that yachting in Longport waters will be a success for all time to come. The yachting colony has increased this year more than 100 per cent, and boats passing through, bound for Southern waters, as well as the cruising fleets from the South Jersey coasts on their way north have found many friends in the club. The deep waters surrounding us have afforded a good anchorage for craft of deep draft, and we've enjoyed visits of a week or more from many of the big boats from the Philadelphia, Corinthian and New York Yacht Clubs.

Capt. Phillipps' Quicksilver has not been beaten this season. Her owner gives the credit of her wonderful performances in the speed-boat racing to the faultless and perfect work of his six-cylinder engine, which has responded to every test ever since she slipped into the water in July.

Keen interest was aroused July 25, when, to settle an argument of long standing, Capt. Burnett, with the Lord Jeffery, and Vice-Commodore Wootton in the Black Cat, agreed to race to Barnegat City to decide for all time the relative merits of these two 20-foot bones of contention. The first boat to cross the line at Barnegat City was Lord Jeffrey, with Capt. Burnett up and pushing hard on the lines. Commodore Wootton came strong all the way, but when within 500 yards of the finish the gasolene tank of Black Cat was punctured by mosquitoes and she finished a bad second. Capt. Wootton says he will cease to follow the "sea."

Capt. Goldenberg's Water Witch, a new cabin cruiser, has fulfilled all expectations. She has been in every race and from the beginning of the season has showed "class."

Because of our deep water, docking facilities and easy access to the ocean, the big regatta of the season was run from the anchorage of this club on July 30. The Seaside Yacht, Ventnor Motor Boat, Longport Yacht, Ocean City Yacht and Motor Boat and the Philadelphia Yachtsmen Clubs all sent entries for the event, and there was some great ocean racing.

SEASIDE YACHT CLUB

The recent performance of Capt. Walter Reed's flyer Vanish in the spectacular motor boat race around Holly Beach to Camden was a remarkable success, even though disaster snatched a great victory from this little 25-foot wonder when she was well ahead of the fleet, after 30 miles of the race had been covered. The race itself established a new record for motor boating in this section of the country, when eight tiny speed boats—mere wooden shells—carrying high-powered engines, were guided by 16 men, who pitted their seamanship and daring against the dangerous Rip-Raps of Delaware Bay and the treachery of old ocean, just for "the fun of the thing" and the glory of winning.

Vanish made short work of the run down the coast from Holly Beach, and led Kathryn, Gibson Girl, Ruric, Yvonne, Elymaja and Zip II, until she ran into the Rips around Cape May Point. Here she began to labor and toss, and it seemed for a time that the seas would smother her. Only the high speed kept the boat out of the heavy wash, but speed had to be cut down when the racing engines threatened a catastrophe. Already Elmaja had capsized off Cape May, and the rest of the fleet were experiencing trouble in keeping on the big, shooting seas.

While passing Block Island, Jesse Jones, who had the wheel of Kathryn, was struck by a big wave and half thrown out of the cockpit. He was forced to relax his grip on the wheel, and the rudder immediately whirled about, throwing the boat along the sea and nearly causing her to turn turtle. John Vanderslice righted the craft with one hand, while with the other he pulled Jones to his seat.

After passing the Rips the mechanicians opened up wide, and seven lean streaks of fire and smoke jumped forward on the last leg of the journey and ripped the Delaware into ribbons. But right here is where the crash came. The boats were well bunched, and Vanish had started to regain her lead, when, without any warning, a cylinder pin broke, and Vanish was helpless and out of the race. The crippled boat was towed into Maurice River, while Capt. Harry Andrews, with fleeting visions of the prize so nearly won, watched the remaining smoke boats tear on up the Delaware to the finish.

No other accident marred the race except the ramming by Zip II of a heavy log when she was within a few hundred yards of the finish. This did not stop her, and she limped across the line, the winner, under reduced speed.

RALPH HARCOURT.

From the Foot of Lake Erie

Taking it on the whole the races of the Great Lakes Power Boat League did not bring together as many fast boats as one might have hoped they would, and although there was an abundance of good sport the meet had rather a local tone.

An accident on the last day spoiled one of the races in which interest was centered—the T Class event—with Hoosier Boy and La Truda entered. The latter shipped so much water that it was necessary to beach her, and that settled the fun. In the R Class handicap, earlier in the meet, there were ten entries, and La Truda won from scratch with Niagara II following, but in the other events there were fewer starters. The S. Class race was interesting. It was won by Red Head, owned by Harry Elliott, of Buffalo, with Frank Sidway's Arab II in second place.

Around the Buffalo Yacht Club just now there is talk of starting a class for small boats which will probably take definite form before long. There is a feeling that as the classes are arranged now the small boat owner has no chance, and as most of the younger members have boats of that kind the suggestion of giving a place on the programme for boats that measure about 18 feet is decidedly popular. Just what regulations will govern the proposed new class is still a matter of speculation, but the feeling seems to be that it should be for boats 15 to 18 feet on the water and about 23 feet over all. Many of the small boat owners like the rule of the Inter-Lake Yachting Association just as it stands. It is too late to do anything this season, but there seems to be little doubt that the small boats will have a show next year, and when the class is formed the cup will be worth fighting for.

After being homeless for ten months on account of the moving of the club house, the Yacht Club has come into its own again, and an effort is being made to make up for all the months that were wasted. A smoker early in July was the real house-warming, although the flag raising took place on August 6.

The Motor Boat Club outdid itself in entertaining the officers and men of the Naval Militia fleet, which visited Buffalo August 11 and 12. There were 1,000 of them, but that did not tax the hospitality of the club, and the decorations and arrangements for entertainments were lavish in the extreme.

The home of the Buffalo Launch Club on Grand Island is proving more popular than ever this summer. Not only has there been an unusually good programme of races but numerous social events have added to the enjoyment.

C. B. MCCUAIG.

Regatta of the Sacramento and Washington Boat Clubs

The first motor boat races of the season in California waters were held at the up-river town of Clusa, a bustling little place situated miles above the city of Sacramento on the Sacramento River. The day was a scorcher, the mercury crawling up to something over a hundred in the shade, nevertheless this did not deter the entire country side turning out to witness speed trials of the best boats on the river.

The Pacific Motor Boat Club, of San Francisco, sent three cruisers up to participate in the cruiser class, but none of them reached their destination. Wanderer, Liberty and Eulalie made the attempt, but the river is extremely low this season, and not being familiar with the shifting channel the skippers of the boats called it quits at Sacramento.

Eight races were scheduled for the carnival regatta, but the contest for single-cylinder boats was called off owing to the non-appearance of the Pankost 21, which broke a cylinder, and the Alice D, No. 2.

Rivalry is keen between the Washington and Sacramento Clubs, both of which make their headquarters at Sacramento, and each one was anxious to take the speed race above all others. Colusa itself had entered their fastest, the Russed D., but the best it could do was to take second place. Dr. M. Silva's Azores, speed burner, a 40-50-horsepower, six-cylinder, took the lead at the start, and was never headed, covering the estimated 4-mile course in 10 minutes 32 1/5 seconds, which was nothing remarkable.

The semi-speed boat contest was a good race. It was over a 2-mile course, and R. J. Morrisey's Possum, flying the colors of the Washington Boat Club, carried off the honors. The Red Raven Splitz, a 21-foot boat of original design, was a close second.

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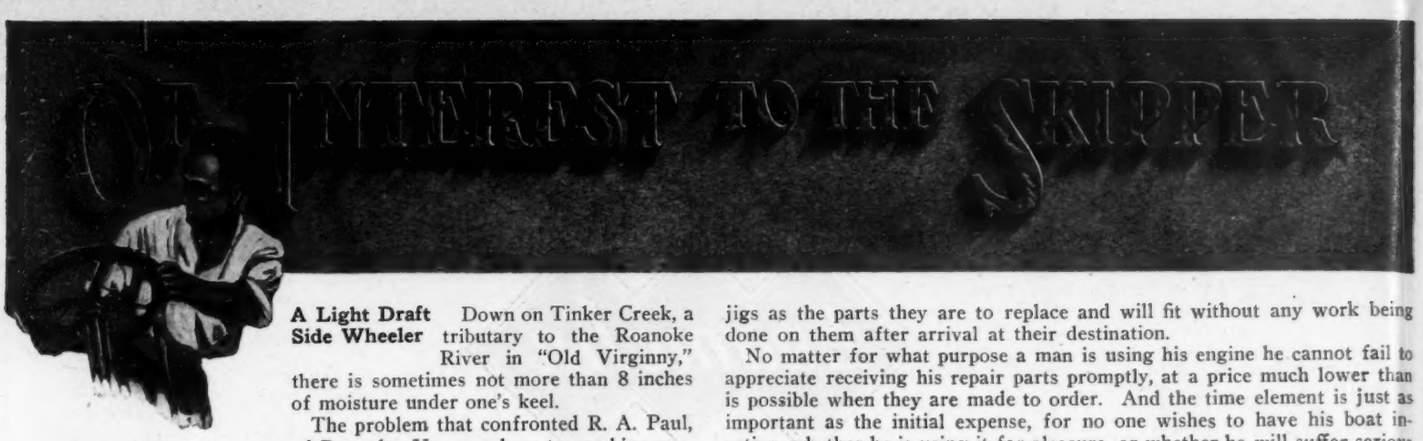

A Light Draft Side Wheeler Down on Tinker Creek, a tributary to the Roanoke River in "Old Virginny," there is sometimes not more than 8 inches of moisture under one's keel.

The problem that confronted R. A. Paul, of Roanoke, Va., was how to combine passenger-carrying capacity with a draft shoal enough to prevent being hung up every once in a while.

Mr. Paul's solution of the difficulty took the form of a flat-bottomed boat, the Evelyn by name, 27 feet long and 4 feet beam, and drawing with

Evelyn, the 27 x 4 Side-Wheeler, which Draws but 7 ins. of Water.

a full load of fourteen passengers, besides the pilot and engineers, but 7 inches of water.

The means of propulsion consist of two paddle-wheels, each 38 inches in diameter, with the buckets set flush with the bottom of the hull. There are eight of these buckets, each 12 inches long and 6 inches wide, on each of the paddle-wheels.

The power plant consists of a 3-horsepower, single-cylinder Gray motor, installed athwartship in the stern of the boat. To the engine crank shaft is coupled a reverse clutch, carrying a small gear wheel, which engages with a large gear wheel on the paddle-wheel shaft. The difference in diameter between the two gear wheels is such that the paddle-wheels are geared down to one revolution for every 6 4/5 revolutions of the engine.

As will be noticed in the illustration of the power plant, the muffler is set fairly in the center of the boat, while the fly-wheel of the engine balances the weight of the reverse gear and the large gear wheel.

And here's how the Gray people solved another man's problem.

Last month a man in Mexico, with a twin-screw freight boat, had one of his engines stolen and sent a long telegram to the Gray Motor Company, at Detroit, for an exact duplicate of his engine, a 1906 double cylinder, insisting on this particular model to correspond to his other engine.

Of course the company does not carry a 1906 engine in stock, but they do carry a complete line of parts in stock. It was a comparatively simple thing to pick out the necessary parts and assemble them.

The next day, after a thorough test, the engine was expressed to the Mexican customer.

In the same way any engine ever built by the Gray people could be assembled complete at an instant's notice from the parts carried in stock without any machine work whatever.

Realizing that nothing irritates an engine owner more than to have his outfit out of service through lack of some trivial part, the Gray Motor Company keeps in stock duplicates of every part manufactured, carefully catalogued for immediate shipment. These parts are made from the same jigs as the parts they are to replace and will fit without any work being done on them after arrival at their destination.

No matter for what purpose a man is using his engine he cannot fail to appreciate receiving his repair parts promptly, at a price much lower than is possible when they are made to order. And the time element is just as important as the initial expense, for no one wishes to have his boat inactive, whether he is using it for pleasure or whether he will suffer serious loss of money and business from having a commercial outfit out of commission.

Successful on the Course and Aboard Cruiser and Tender The ocean race from Holly Beach to Camden, N. J., a distance of 108 miles, was practically cleaned up by boats equipped with Sterling engines. In the first class, Zip II, owned by Thos. Hutchinson, of Woodbury, N. J., and equipped with a 45-65-horsepower Sterling engine, finished first, and won prizes amounting to $750; in other words, Zip won the $500 special trophy for covering a distance in a shorter elapsed time in 80 and over class; also Ogle trophy, a first prize in first class.

Kahryn, owned by Neil McNeill, of Philadelphia, Pa., was first in second class. This boat is equipped with a 30-45-horsepower Model B Sterling engine.

Gibson Girl won second prize in the 70 to 80 class. This boat is owned by William L. Dickel, of Wildwood, N. J., and is equipped with a 25-40-horsepower Sterling engine.

Uyvonne, owned by Edwin Kain, of Philadelphia, Pa., and equipped with an 18-25-horsepower Sterling engine, finished first in the first class.

As evidence that the good work of Sterling engines is not confined to racing events we print on page 236 a picture of Erminie, owned by W. A. Cook, Jr., of Brooklyn. She is 42 feet long, 8 feet 2 inches beam, 26 inches draft. Equipped with a 30-45-horsepower Model B Sterling engine she develops a speed of about 12 miles—a splendid showing for a boat of this class.

Uncle Sam also has obtained splendid results from the Sterling, the United States government tender to the battleship Chester has just been equipped with a 40-horsepower heavy-duty Sterling engine. This tender is 35 feet long, 7 feet beam, and weighs 8,400 pounds. It is to be used in place of the steam cutter, which weighs 15,000 pounds. The steam cutter formerly used has a speed of 7½ knots, while the boat with the gasolene engine has a sustained speed of 10.7 knots per hour.

The United States government also ordered from the Sterling Engine Company, two 40-horsepower heavy-duty engines to be placed in the tenders of the battleships Birmingham and Salem.

The Sterling Engine Company announce that they have made important improvements in their Model B, four-cylinder engines. The accompanying cut shows their 1911 model engine as built in three sizes—18-25 horsepower, 25-40 horsepower and 30-45 horsepower.

The most important improvements are the mechanically-operated oiling system and adjusting nuts on the push rods..

The cylinders of these engines are cast in pairs, an arrangement that

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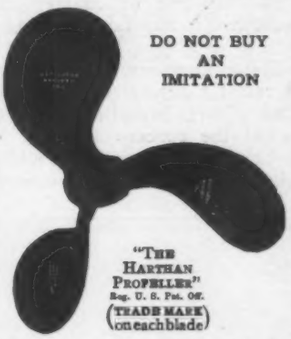

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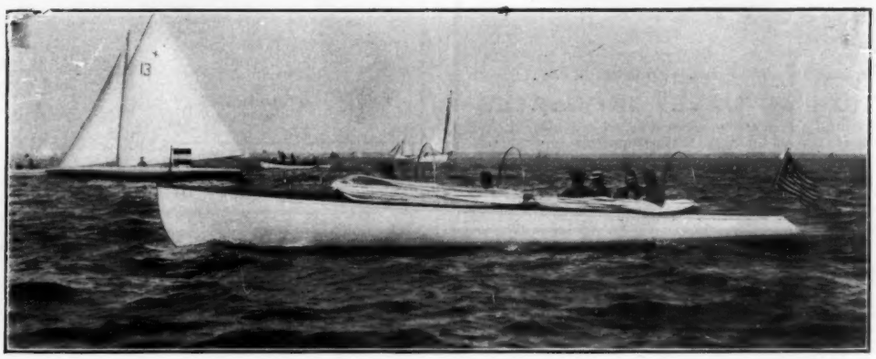
reduces the number of joints to a minimum, and the cylinders and valve seats are thoroughly water-jacketed. Among the striking features of Sterling engines may be mentioned the following:

Valves, both inlet and exhaust, are mechanically operated, insuring absolutely positive action, are placed on opposite sides of the engine, and are interchangeable. The exhaust manifold is water-jacketed, there is a large plunger water circulating pump, and also an unusual absence of exposed gears and trappy parts, with but few joints, bolts and nuts used in its construction. An exclusive feature of Sterling engines is an oil groove around the lower base, intercepting any oil that might ooze from the sides of the engine, and conveying it to a partition at the rear of the base, instead of allowing it to run over the engine-room floor or into the bilge of the boat. The reverse gear is contained in an extension of the lower base, thus assuring perfect alignment.

These engines can be run at from 200 to 1,100 revolutions per minute, although the low rated power is developed at a speed of about 600 revolutions per minute, and the high rated power at a speed of about 900 revolutions per minute. These engines are used for speed work and cruising. When for speed they are furnished with aluminum base; when for cruising work they are furnished with iron base and heavy flywheel.

Catalogue illustrating and describing the full line of engines built by the Sterling Engine Company will be sent free to anyone requesting it.

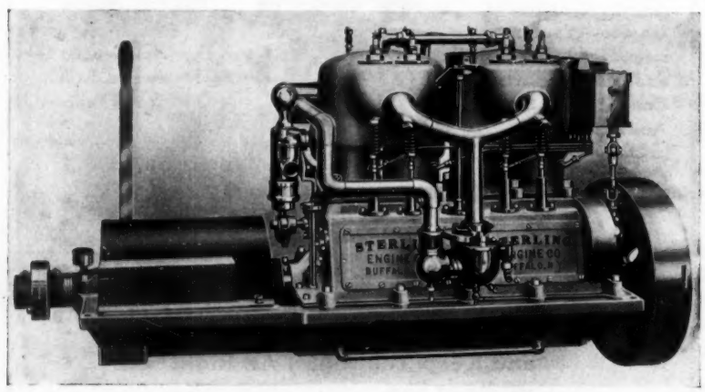
A New Marine Railway The Holmes Motor Company, of West Mystic, Conn., have recently completed the erection of a 150-foot marine railway for the handling of large yachts and launches. This innovation at the Holmes plant gives the concern facilities for handling boats, either for building, storage or repairs, in a most up-to-date and thorough manner. West Mystic is located about half-way between Boston and New York, being but a short distance from New London, Conn., and very accessible to yacht owners.



Erminie, a 42-footer whose 35-40 H. P. Type B Sterling Pushes Her at the Rate of 12 Miles Per Hour.

The Jump-Spark Coil The following extract from the paper read by Mr. Carl F. Pfanstiehl, at the last meeting of National Gas and Gasolene Trades Association, describes so plainly the underlying principles of the jump-spark coil that we reproduce it herewith for the benefit of our readers:

An electric current appears to possess the two properties most characteristic of matter, viz.: Inertia and momentum. The current does not start instantly on completing a circuit, but takes some time to get under full headway; to be sure, the time is usually very brief, but, nevertheless, *some* time is needed to start it, and vice versa an electric current does not stop instantly, but shows a tendency to persist for a brief instant after the circuit is broken. *It is this tendency to persist, or apparent momentum of a current, which causes it to burst through the intervening air space; thus producing the spark seen on breaking a circuit.* We cannot, however, conceive of inertia and momentum being associated with anything which does not possess mass and weight, and as electricity possesses neither, how, then, can it display inertia?



The New Sterling 1911 Model, Built in 18-25, 25-40 and 30-45 horse-power.

This leads us to another and, perhaps, the most important characteristic of current electricity. Electricity, flowing in a wire, does not confine its influence solely to the wire itself, but sets up a kind of rotary disturbance, in the nature of whirls, near to and around the wire, in the all-pervading ether of space. The plane of rotation is at right angles to the direction of current flow, and these whirls are now believed to be partly material in nature; that is, they are supposed to be built up of some form of matter in an exceedingly finely divided state. These whirls, then, can and do possess inertia and momentum, and therefore cannot be started or stopped instantly. As the whirls are brought into play by the electric current it is evident that the first impulse of current is used up in overcoming their inertia, thus retarding the current, which does not reach its full value until the whirling motion is uniform, and, conversely, when a circuit is broken, the momentum of the whirls causes them to rotate for an instant, thus maintaining the current.

We cannot here, for lack of time, go any further into the mechanism of these whirls, excepting to say that they are commonly known as magnetic lines of force or simply magnetism. We can say, then, that an electric current magnetizes the space around it, and that the magnetic whirls increase in size as the current increases and decrease in size as the current decreases, and that the inertia of an electric current is not due to the current itself but is a property imposed upon it by its surrounding magnetic field.

The magnetic field around a current carrying wire can easily be shown by sprinkling fine iron filings on a cardboard, through which the wire is passed at right angles. The filings will arrange themselves in concentric circles around the wire, a photograph of which will be shown later. Since the inertia and momentum of an electric current are dependent upon the magnetic field around it, can we not, then, increase its momentum by increasing the magnetic field? This can be done either by lengthening the circuit, thereby magnetizing a greater space, or better, by coiling the wire up into a compact coil, making the current circulate around a small space many times, thus magnetizing the small space very strongly. In this case, the magnetic whirls around each turn of wire tend to open up and include all the other turns, and continue only to expand until an equilibrium is established between the strength of the current and the elasticity, as it were, of the whirls. When the expansion or acceleration ceases the entire current is used up in merely maintaining the whirls, and is finally dissipated as heat, being no longer available for useful work. (We must bear this important fact in mind when considering the efficiency of coils.) When the current is shut off there is nothing to keep these magnetic whirls going but their own momentum, the energy of which is rapidly used up in maintaining the current for an instant, which again is finally dissipated as heat.

So far we have considered these magnetic lines of force in the air only, or, more strictly speaking, in free ether; but they do not pass with equal freedom through all material substances, there being a few which offer a path much more free, the principal ones being iron, nickel and cobalt. Iron, being the best, offers a path from 100 to 10,000 times better than air, depending upon its physical and chemical properties. While there are a few substances which very slightly retard magnetism, so feebly, however, that we need not consider them here, all other materials neither help nor retard it, but offer the same resistance or reluctance (as it is called in the case of magnetism) as air. Now, if we introduce into our coil of wire a bar of iron, we thereby provide a much easier path for the magnetic lines of force, which now greatly increase in size and density.

Let us stop for a moment and turn our attention to an ordinary wire or touch-spark coil. It consists of a few feet of rather coarse wire, insulated and coiled around a bar of iron, or, better yet, a bundle of small iron wires. On connecting the coil with a battery the current starts flowing, but is retarded for a moment by the increasing magnetic field, which continues to build up or expand until it balances the strength of current, when its

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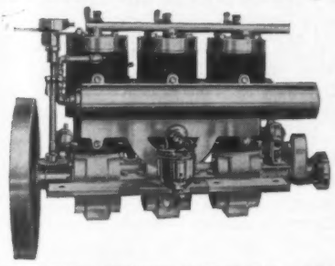

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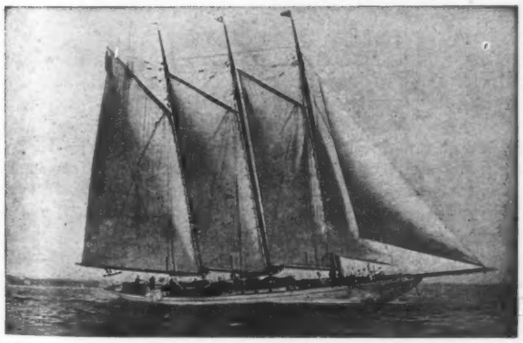

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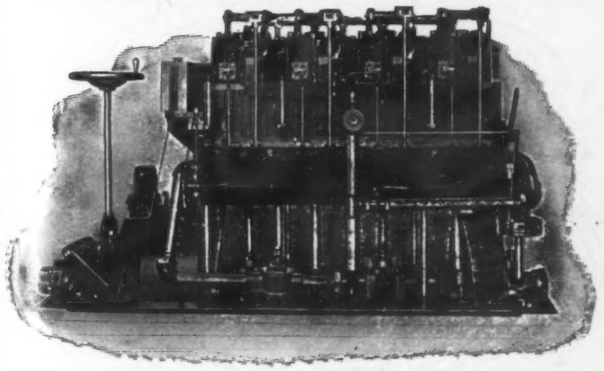

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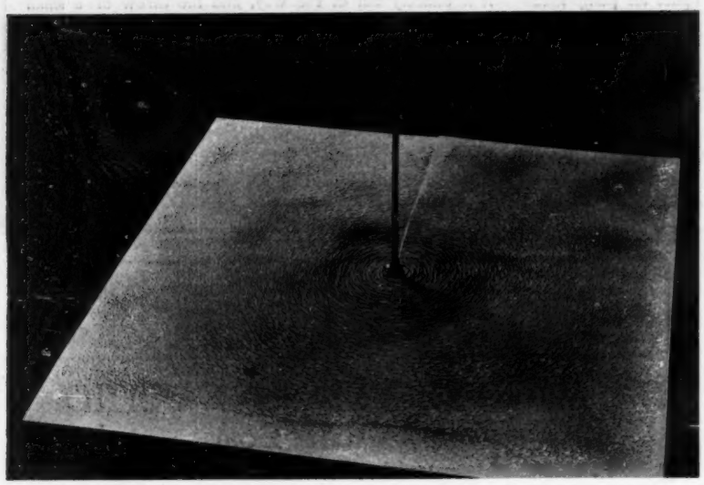
acceleration ceases, and the current and the magnetic field are both constant. When the circuit is broken the magnetic lines continue spinning for a short time by reason of their momentum, thus causing the current to persist with considerable force, bursting across the air space, tearing minute particles off of the terminals and burning them up along with some air, thereby trying to bridge over the broken part of the circuit, resulting in the familiar red flash or spark. When the arc is finally broken the current, of course, ceases, and an actual contact must be made in order to again start



Photograph showing magnetic field, generated around a copper wire carrying a current of 120 amperes. The wire passes through a piece of paper, and the magnetic lines are formed by iron filings sprinkled on the paper.

the current. As magnetism does not penetrate into the center of, and saturate, a thick bar of iron as readily as it does a thin one, the cores of all coils are built up of many thin, soft, iron wires. We will consider the special requirements of the core later.

We have wandered a little from our jump-spark coil and must return to it. We have seen that the spark from a touch or make-and-break coil does not deliberately jump across an open air gap, it simply follows the separating points which were first in actual contact, until its "extra" force of momentum is exhausted as heat. A jump-spark coil, however, must furnish an electric current with sufficient force or pressure to deliberately jump across and overcome a fixed air gap, such as the gap between the points of a spark plug, without previous contact. To overcome in this manner an air gap of one-half inch a pressure of from 10,000 to 20,000 volts, depending upon the condition, is needed, whereas in the case of our make-and-break spark a momentary pressure of only a few hundred volts was reached. How, then, can we produce this excessive pressure? We cannot do it with touch-spark alone, as it is evident that an actual contact must first be made in order to start the current. We must have, then, another circuit or coil of wire, separated and insulated from, but placed in the magnetic field of the first, so that when the magnetic lines are expanding or shrinking they will pass through or cut, as it were, its turns thus producing an electrical pressure or E. M. F. in the second or secondary coil, as it is called. This pressure lasts, of course, only as long as the magnetic lines are in the act of expanding or shrinking, thereby cutting through the turns of wire, and it follows that when the magnetic field is of uniform strength the lines of force do not cut but merely thread through the secondary turns, and, accordingly, there is no E. M. F. set up in them. Now the value of the E. M. F. in the secondary coil is, among other things, dependent upon, first, the number or density of the lines of force which cut through the secondary coil; second, the number of times they are made to cut, and third, the speed at which they are made to cut.

Assuming, for the present, then, that our primary coil has been arranged to produce a magnetic field of maximum density, we must now increase the number of times the magnetic lines cut through the secondary by increasing the number of turns of wire. It is evident, then, that a very small wire must be used in order to permit a great many turns without unduly increasing the size of the coil, thus removing the outside turns too far from the core into the weaker part of the magnetic field.

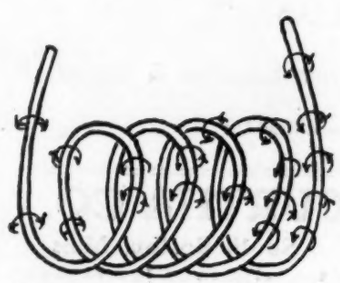


Diagram showing magnetic lines forming around wire instantly after current begins to flow.

Consider the secondary coil as being properly wound, it remains then for us to increase the speed at which the magnetic lines cut through its turns; that is, the rapidity at which the magnetic field is made to expand or shrink. This can be accomplished, to a certain extent, by employing a large current, say 40 or 50 amperes, which forces the magnetic lines to build up faster than a weak current; but this is, of course, owing to the excessive current required, entirely out of the question.

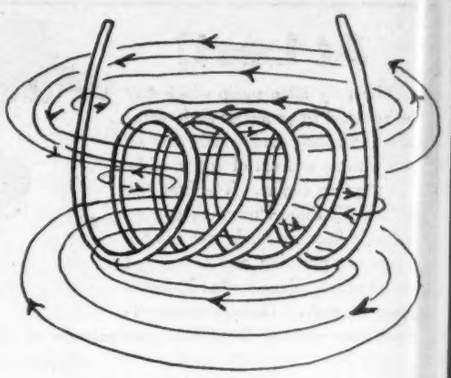


Diagram illustrating magnetic lines an instant later, showing how they combine.

Now, it happens that magnetism dies out faster after breaking circuit than it builds upon making circuit, but owing to the arc which bridges across the gap on breaking circuit, thus forming a conducting path for the current to continue for an instant, the magnetic field does not shrink as rapidly as it would if the arc were prevented. This can be done in a number of ways. For instance, by blowing the arc out, by directing a strong blast of air against it, or by placing it in a strong magnetic field, and several other ways which are more or less inconvenient. But the way which lends itself to the present requirements best is by absorbing in a condenser the "extra" momentary current, which would otherwise cause the arc. This is by far the most practical way of accomplishing it. We must leave the condenser and its action for a little while, but will presently return to it..

The vibrator is merely a means for rapidly making and breaking the circuit, and in its conventional form consists of a thin piece of iron with a contact point on it, supported near one end of the iron core by a spring. The current, on its way to the primary winding, is made to pass through a stationary contact point into the point mounted on the iron head. This iron head is attracted by the core when it becomes magnetized; the circuit is thus broken, when, of course, the core loses its magnetism, allowing the vibrator to spring back into contact again. This process is repeated many times a minute.

Having now a general idea of the theory of an induction coil let us follow it through a complete cycle before we take up the practical construction of each part.

Contact having been made at the timer, the current from the battery starts flowing across the points on the vibrator through the primary winding, where it circulates around the iron core, then back to the battery. The instant the current starts it begins to magnetize the space around it, which effect is greatly concentrated in the primary in the manner already described. As the magnetic field is expanding the lines of force cut through the many turns of secondary winding, thereby producing in it an E. M. F., which, however, owing to the comparatively low rate of expansion, is too feeble to force a current across even a very small air gap. When the magnetic field has grown strong enough to attract the vibrator armature against the tension of its spring the circuit is broken, and the "extra" current, which would otherwise maintain itself for an instant by arcing between the points, is absorbed by the condenser, and thus suddenly choked off.

(To be continued.)

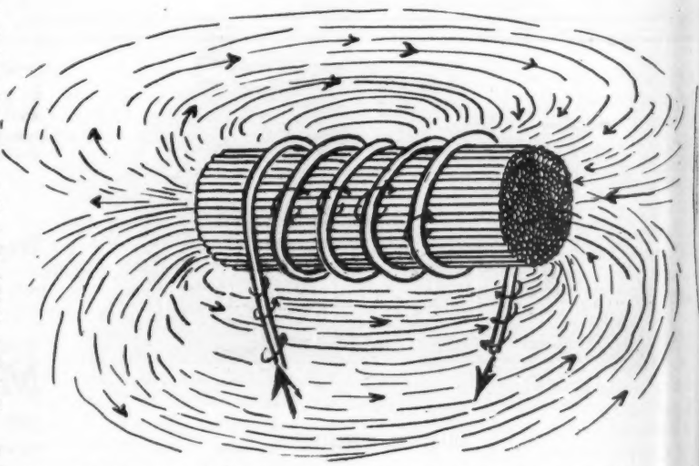


Diagram showing increase in strength of magnetic field when iron core is introduced to provide easier path for magnetic lines.

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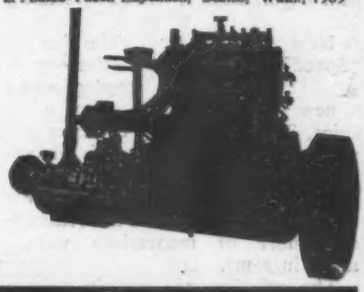

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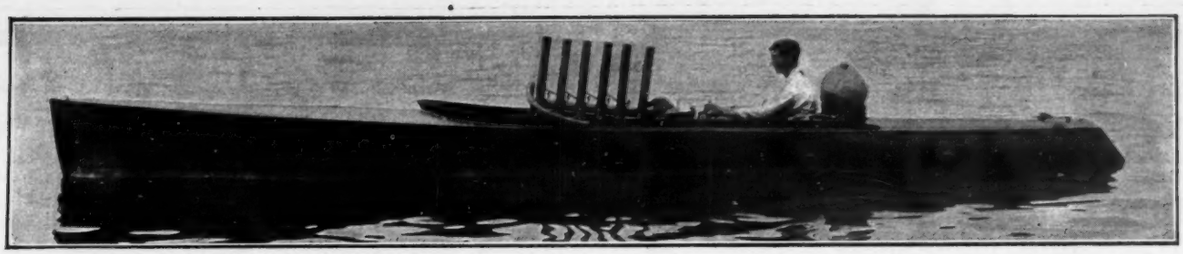


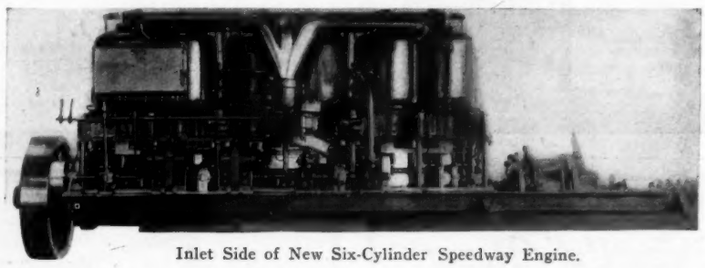
The Eel, a 25-footer, in trying out a new Emerson Engine, made a mile in 1 minute 46 seconds.

What the Emerson Did in an Old Hull The Eel, owned by Mr. Al. Traver, of Poughkeepsie, N. Y., has developed into one of the most remarkable boats of the year. She is 25 feet over all and 39 inches beam, and was sent to the Emerson Engine Company, of Alexandria, Va., by Mr. Traver to have a six-cylinder special racing engine put in her, in order that it might be tried out preparatory to being placed in a special hull designed for Mr. Traver.

After the engine was limbered up in the old hull she was taken up to the Government Course in Washington, which is absolutely correct, and showed the remarkable time of a full mile in 1.46, also covered 33 measured miles in exactly 1 hour, and this makes the old hull the fastest 25-footer in the world.

If the new hull into which this engine is to go comes up to anywhere near expectations it will be something sensational.

A New Six-Cylinder "Speedway" Engine The Gas Engine & Power Company and Charles L. Seabury & Co., Con., builders of the "Speedway" gasolene motors, have recently brought out a new design well worthy of a description. It is a six-cylinder machine, 8 inches bore by 8 inches stroke, similar in many respects to the regular "Speedways." This new engine belongs to the strictly high-speed class, and was designed for use in racing boats. For this reason a number of innovations were made in same.



Inlet Side of New Six-Cylinder Speedway Engine.

The cylinders are cast in pairs and mounted on stanchions. The bedplate of the sectional type is built up of cast steel sections bolted to steel angles. As, in a race, it is desirable to keep weights as low as possible, the center line of cylinders is offset from the center of crankshaft, so that a short connecting rod can be safely used. Connecting rods are of nickel-steel, drop-forged, with upper ends bushed with phosphor bronze and lower ends bored to receive babbitt shells. The main bearings are also provided with removable babbitt shells. The best material of its kind is used throughout, special high-grade steel, phosphor bronze, cast steel, and where great strength is not required aluminum. Special attention has been paid to make all fastenings secure against loosening from vibration. The engine frame is tightly closed in with sheet aluminum splash plates, except the forward end, which is left open to allow a circulation of air from the cast steel fan around fly-wheel. The after end has an air connection to the carburetor. The combination of fan fly-wheel and carburetor suction are very effective in keeping the base cool and free from smoke. There are two auxiliary shafts on the engine—one each side, running fore and aft. These shafts are driven by spur gears from the forward end of the crankshaft, there being a fiber and bronze idler in each train. One of the shafts operates all the valves, and on its after end a gasolene pump and constant-level oil pump, for keeping the copper pan beneath the engine free from oil. The second shaft drives all the other auxiliaries, forced feed oiler, two gear pumps for circulating water and Bosch magnetos for two systems of ignition. The two ignition systems are Bosch high-tension dual, with coil and battery for starting and Bosch magnetic plug ignition.

The oiling system has been carefully worked out, all important bearings being fed from the twenty-two feed oiler. The clutch is of the planetary type, with positive drive and a phosphor bronze cone for handling at the dock, and for bringing the shafts up to speed before engaging the positive. The water-cooled exhaust manifold, of light sheet steel construction, is open at both ends, providing for exhaust overboard from one end and atmospheric exhaust with cut-out valve at the other. This engine has developed 210 brake-horsepower at 1,000 revolutions per minute on the test block, connected to a hydraulic dynamometer, and is capable of doing this continuously for an hour's run.

The complete weight, including oilers, magnetos, carburetor, oil pans, splash plates and shaft coupling, is 2,700 pounds.

Practical Hints on Lubrication "A long history of squeaks and minor replacements should teach the owner that many parts of the engine require occasional oiling for which his mechanical or automatic system makes no provision. Nothing is easier for the owner who is his own engineer than to forget a few rather inaccessible screw-down grease cups; worse still, those many ungreased moving parts, when he pays his visit to the boat," says expert Frank B. Killian, of Mobiloil staff, of Rochester, N. Y. "When he is finally convinced that he has at last exhausted the tale of separate oilings, that he knows by sad experience every single detail of the motor anatomy which requires periodic attention with an oil gun, it is a good plan to get a list of the parts neatly typed on a card, to render the card waterproof with size varnish, and to secure it by pins in an inconspicuous portion of the boat, or inside the cover of the tool box. Otherwise even the most careful owner is likely to omit important details if he attempts to carry the necessary list in his head."

The simplicity and clearness with which the Vacuum Oil Company, of Rochester, N. Y., have explained the subject of lubricating in their richly-illustrated and beautifully bound new booklet—"What the Motorist Should Know"—puts this question before the public in a much more efficient manner than has ever been accomplished before. It tells why the different grades of oil are necessary for different types of engines. One of their chapters is headed: Proper Oil is a Business Proposition, and a knowledge of this chapter alone will enable a man to correct faults which are costing him a goodly amount of money each year. It passes the bounds of an advertising medium and stands alone on its literary quality. The Vacuum Oil Company are willing to send one of these booklets, free of charge, to those who are personally interested, and will address the Vacuum Oil Company, 29 Broadway, New York City, and stating that they desire the book mentioned in YACHTING.

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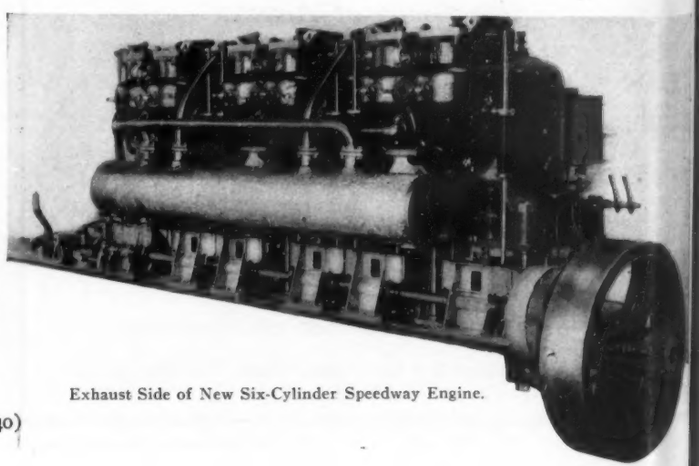

Exhaust Side of New Six-Cylinder Speedway Engine.

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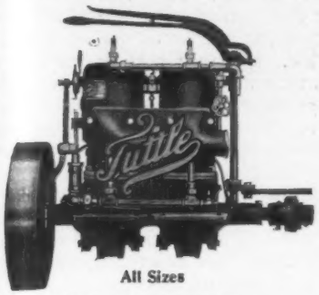

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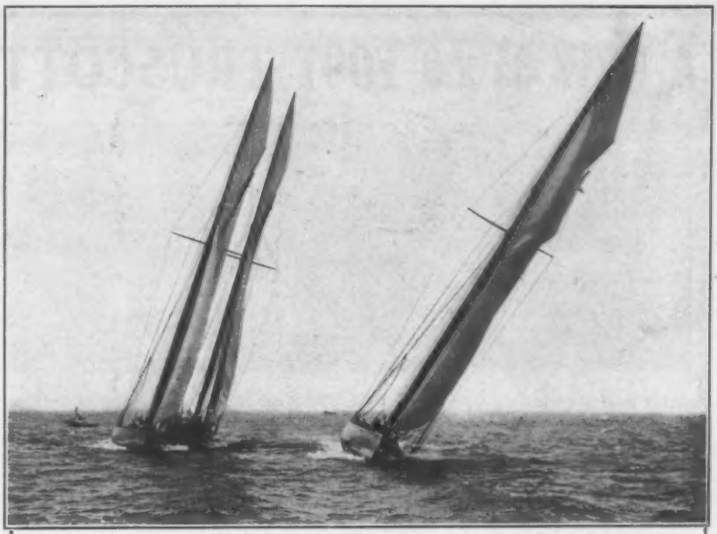

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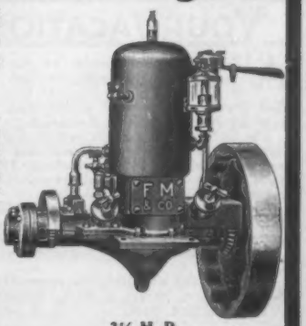

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The Mackinac Race

(Continued from page 194.)

that we could hail her. They told us that they had smashed their spinnaker boom and could not hold their course, as she would not steer straight down the wind. She then held on out into the lake a long way, and we picked up the breeze she had, a true south wind, and set our course past Point Betsy for North Manitou. The sail through the Manitou Passage was a corker. The wind seemed to channel in between the headland of Sleeping Bear and the islands, and it went tearing down the straits in a perfect gale. Several times it got so heavy that I had to take the spinnaker off to keep her from burying herself. Twice the wind pressure was so great in the heavy puffs that she burrowed right into the seas forward until there was solid water a couple of feet deep at her foremast, and the after wave curling over the stern put her whole deck awash, which proved that Valmore was game and would take a driving. The wind held all day Sunday, past Skilligallee and down to the "Shank," when it began to peter out and the last half-dozen miles we sailed dead before it in about an hour and a half. We figured afterwards that if we had averaged 7 miles an hour for the last three hours of the run, while the wind was dying out, that we would have made the run in twenty-nine hours or thereabouts. Just after we finished it breezed up again, and Amorita, which had been able to sail better under conditions of the day, finished about three-quarters of an hour after we did.

It was a great sail, the greatest I have ever known or ever hope to have, and I can wish my fellow-yachtsmen no greater luck than to have one like it some time in their careers. They will remember it and talk of it all their lives after.

In conclusion, it occurs to me that possibly there is too much Thompson in this story, and that the real credit for driving a 34-ton schooner 350 miles in 31:24:06, with her canvas off part of the time in a squall and finishing the last 30 miles rather slowly (which means that a good portion of the race must have been sailed at the rate of 14 to 15 miles an hour), belongs to a game crew and a yacht that will stand punishment, for only with the best of tools can such results be accomplished. After this experience with Valmore there is no doubt in my mind that Lawley, of Boston, builds as good a boat as I want to sail on, and that Elmer E. Hamblen, my captain, who was quartermaster on the Defender in the International race of years ago, turns out a boat at the starting line in a condition ready for the hardest kind of a trial.

In my amateur crew I had Morrill Dunn, H. M. Higinbotham, W. M. Pelouze, E. R. Pike, Chas. E. Burress, P. D. Armour, III—all men who can be depended upon and who seem to be disappointed when a sail comes off, but who wear a broad smile when they get an order to put on more canvas, no matter how heavy the going is.

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The Seawanhaka Cup Race

(Continued from page 190.)

throat and peak lashings and looked like an old-fashioned spritsail. The flying defender nearly doubled her lead to the turn at the Baker's Island stake, and finished the remaining close reach of the triangle under plain sail, but St. Lawrence swung a wet ballooner to the breeze in a vain effort to overhaul her. The Canadian gained 13 seconds on this last leg, but lost the race by 4 minutes and 48 seconds, the time at the finish being: Massachusetts, 4:09:48; St. Lawrence, 4:14:36.

SECOND RACE, JULY 27

One more mishap befell St. Lawrence when the second race of the series was sailed the next day. She had to cut down the area of her headsail triangle. The result was a splice in the luff boltrope of her jib. The splice held for the first beat to windward, but when the crew sweated up the halyards, setting the sail after the run down the wind, the whole head tore out, and, the accident, happening just as the leeward mark was being rounded, the challenger was forced to make a slovenly turn and hung shaking in the wind while a No. 2 jib was hurriedly bent on to replace the now useless working sail. For this race the judges sent the contestants over a two-mile windward and leeward course, in an eight-knot breeze from east of south and fairly smooth sea. Massachusetts won the race by 8 minutes and 28 seconds, at least 3 minutes of which was accounted for by this mishap to St. Lawrence.

Massachusetts got slightly the better of the start, and had worked out a lead of 1 minute and 53 seconds when the windward mark was turned the first time. The start was at 2:10, and the times for the first round the turn were: Massachusetts, 2:50:07; St. Lawrence, 2:52:30.

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The times for the second round of the course were: Massachusetts, 3:33:16; St. Lawrence, 3:39:09, and for the finish of the race: Massachusetts, 4:03:13; St. Lawrence, 4:11:41. Massachusetts won by 8 minutes 28 seconds.

THIRD RACE, JULY 28

It was a triangular course again for the race of July 28. The wind was light and southerly.

The defender again led over the line at the start at 1:10, but St. Lawrence was almost on even terms, being to windward. The first leg of the triangle was a beat, and as usual Massachusetts walked away, gaining over 3 minutes in the first mile.

The American crew took just forty seconds to set their spinnaker for the next leg. St. Lawrence required a minute and 15 seconds, spinnakers being carried to starboard. Massachusetts' gain on the run to the second mark was 16 seconds. On the reach home St. Lawrence swung a ballooner and gained 9 seconds, the time completing the first round of the triangle being: Massachusetts, 1:53:28; St. Lawrence, 1:56:45.

The second round was completed thus: Massachusetts, 2:42:22; St. Lawrence, 2:47:17.

The final official records of this race show: Massachusetts, turned weather mark, 3:15:28; second buoy, 3:24:28; finish, 4:12:55. St. Lawrence quit 3:55.

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Regatta of Chesapeake Bay Y. R. A.

(Continued from page 198.)

wind from the southwest, while her rival carried it from the northwest, and the boats were not over 300 yards apart. At last a dark line advanced up the river, and Eleanor caught the breeze first, giving her good headway before it reached her rival. Eleanor rounded the light just six seconds in the lead, but with Vingt-trois coming up strong. The wind was dead aft, and then began the struggle to the finish.

Fortune favored Eleanor, however, for just a few yards from the finish line she caught a bit of a breeze, and crept over the line 14 seconds ahead. The summary is:

Class Q.	Start.	Finish.	Corrected Time.
Eleanor, B. Y. C.	10.30	3.06.00	4.36.00
Vingt-trois, C. B. Y. C.	10.30	3.06.14	4.36.14

In Class T, Eaglet had everything her own way, defeating the Naomi handsomely by 26 minutes.

The surprise of the day was in the yawl class, when the crew of the Freya learned that they had lost on time allowance to the little Ventura, not only the smallest boat in the fleet but the last but one to finish. The summary is:

Class Y.	Start.	Finish.	Corrected Time.
Ventura, C. Y. C.	10.40	3.33.40	4.26.03
Freya, Cap. Y. C.	10.40	3.08.18	4.28.18
Chenoden, B. Y. C.	10.40	3.20.11	4.39.49
Nenemoosha, Cap. Y. C.	10.40	3.30.59	4.43.27
Grace K., Cap. Y. C.	10.40	3.34.09	4.52.39

Friday dawned as clear as a bell and with a moderate southwest breeze that held throughout the day, although varying in strength at times. The sailing fleet was started at 10:10, when Zillicoa, still without a rival, was sent over the line, for Annapolis, 35 miles distant. Then followed the Q, T and Y classes at 5-minute intervals.

In the T Class, Ojigwan gained such a lead over Eaglet in the windward work that it assured her the victory in the run. Chenoden, in Class Y, went to the fore from the start and led her class across the finish, but had her victory snatched out of her grasp by the little Ventura, which saved her time allowance. The summary:

	Start.	Finish.	Corrected Time.
Class P.			
Zillicoa, C. Y. C.	10.10	3.44.00	5.34.00
Class Q.			
Eleanor, B. Y. C.	10.15	3.37.43	5.22.43
Vingt-trois, C. B. Y. C.	10.15	3.43.00	5.28.00
Class T.			
Eaglet, B. Y. C.	10.20	3.57.05	5.37.05
Ojigwan, C. B. Y. C.	10.20	3.53.58	5.31.02
George E., Cap. Y. C.	10.20	Time not taken.	
Class Y.			
Freya, Cap. Y. C.	10.25	4.04.49	5.39.49
Chenoden, B. Y. C.	10.25	3.47.06	5.21.26
Ventura, C. Y. C.	10.25	4.31.32	5.17.25
Grace K., Cap. Y. C.	10.25	4.17.45	5.51.23
Nenemoosha, Cap. Y. C.	10.25	4.21.43	5.37.52
Wye, B. Y. C.	10.25	4.49.31	5.55.49

That there was joy among the members of the Baltimore Yacht Club when Eleanor completed her fourth straight victory over Vingt-trois in the last day's racing on Saturday goes without saying and for her splendid achievement she was awarded a handsome series cup, making five cups in all that she won during the week.

The Norfolk yachtsmen did not make the run to Annapolis, but hurried home from Oxford, much to the disappointment of the others.

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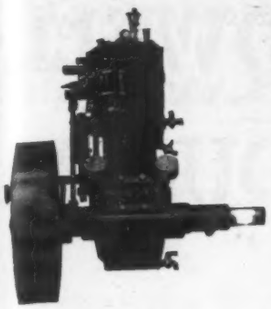

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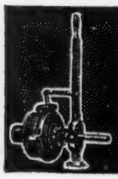

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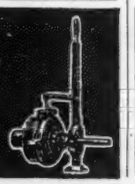

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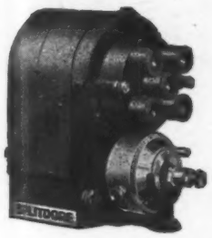

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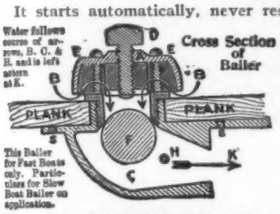
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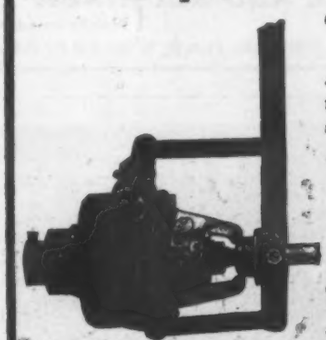

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SYRACUSE ENGINES DO NOT HAVE ALUMINUM CYLINDERS

On page 39 of the "Motor Boat," June 25th, R. W. Crowly, in his article, "The Challenger," descriptive of the English challenger, "Maple Leaf III," says in part: "It has not been forgotten that sea water has a disintegrating action on aluminum, and a 20-gallon fresh water tank is, therefore, carried under the floor boards forward." Isn't this evidence enough to show that you don't want aluminum cylinders in your engine?

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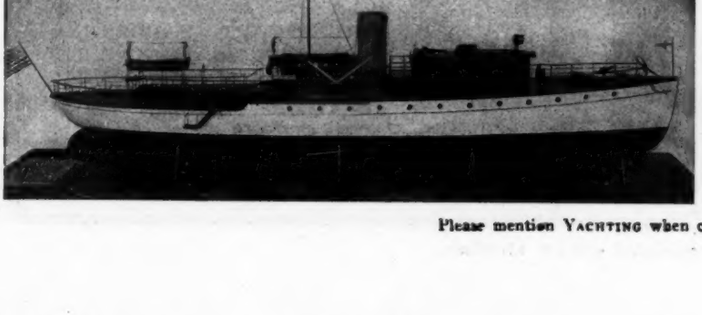

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In the Captain's Cabin

The Experience Meeting

FROM time to time, we have been asked by our readers as to why we do not inaugurate a "Trouble Department" in YACHTING. So many inquiries regarding this have come in of late, that instead of adhering to our former course of writing individual explanations, we have decided to explain our views on the subject editorially, where all of our subscribers will understand our attitude in the matter.

To us, it has always seemed a waste of space in the paper, a waste of our readers' time in writing to us, and a waste of time on our part answering nine-tenths of the "trouble" questions that are answered at length in the average boating publication.

If your engine goes wrong, the name plate on that engine tells you the name and address of the party who not only can give you the very best advice as to what to do with it, but is vitally interested in seeing that you get the best results from his product. If you imagine that you're not getting the speed which you should from your boat, and believe that a different diameter or pitch of wheel is what you need, there are makers of wheels who advertise in each issue of YACHTING who will tell you frankly just what your trouble is, and who can prescribe more accurately than anyone else just what you need in the way of a new one. If you are thinking of a new engine for your boat and would like to know just about what you could expect in speed with a new power equipment, the man who designed or built that hull for you, or for the man from whom you bought it, can tell you just how far you can go in the way of increased weight and how much clearance you have for a larger wheel, if you take the matter up with him.

To a certain extent, an editor can give you an apparently satisfactory reply, because the editor must necessarily be posted on the theoretical side of your case—after he studies it a bit. On the other hand, the man who built your engine, the man who builds wheels and the man who built or designed your hull, has the record of the individual peculiarities of these particular parts of your equipment and doesn't need to waste any time theorizing. He can put his finger right on the cause of the trouble, if you describe it to him as accurately as you would have to do to us, and moreover, each of these men can tell you just how far you can go without overshooting the mark.

In case of troubles of this kind, the manufacturer is the man to whom to appeal, and he is more than glad to do so if you give him a chance.

On the other hand, there is all through the fraternity, particularly among those who expect to own boats next year, a real desire for information as to what kind of a boat to choose for a certain specific service, and this is something in which the man who has met a similar need is best qualified to give this information.

This is why, commencing with the October issue of YACHTING, we shall establish an Experience Meeting. Every man who has cruised in a boat during a season, has always discovered ways in which she might be improved. Now what we want is for each of our readers who feels so inclined, to send us in a description of the boat which he used during the season of 1910. Tell of her model and arrangement, and why you chose that particular model and arrangement. Also tell us if you were going to buy a brand new boat next season, the changes you would make, and why. Send diagrams and photographs wherever possible. Never mind the style to the article; give us facts.

For every such article which is available for publication, we will pay our regular rates for contributions.

This invitation is particularly extended to the owners of open boats from 18 to 25 feet in length, who have actually made from two days to a week's cruise aboard.

A Serial Story

We have debated for some time whether or not our readers preferred serial stories in a magazine of the character of YACHTING to articles that are finished in one issue, or at the most run over two numbers. For the past year we have had so much timely matter on hand and so many articles of practical value, that we have not run a serial fiction story. But we have recently acquired the rights to a sea story of unusual interest that has been out of print over twenty-five years and is practically unknown to the present generation. This is no other than the story of the "Lady Maud—Schooner Yacht," by W. Clark Russell, which achieved great popularity about thirty years ago. Believing it will make excellent reading for the boys during the winter months, we are going to publish it serially, commencing with our October issue and carrying it through to the Spring. Good fiction of the sea is particularly hard to obtain in this age of steam and realism, and we believe that this story will appeal to the readers of the present generation as greatly as it did to those a generation ago.

Now is the Time to Subscribe

While the summer has always been the active yachting season, during which the principal yachting events that take place are covered by a boating magazine, we feel that the most enjoyment that a reader gets out of a yachting publication is during the fall and winter months, when he is not so actively engaged on the water, and when he finds time in the long winter evenings in front of the fire (or maybe a radiator, if he happens to live in a New York flat), to read the magazine thoroughly. For that reason, we run more practical articles dealing with seamanship, gas engines, boats, sails, etc., during the winter months. To be assured of getting these numbers, September and October are the months to subscribe. If your subscription expires during this month, do not fail to renew; or if you have been buying the magazine at the news stands, you can save money by signing the attached blank and mailing it to us direct. We would rather have you sign articles with us for a year's voyage than jump aboard for a trip every now and then.

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We would also call the attention of our readers to the collection of photographs of Mr. C. S. Bolles, which we have recently bought and which are advertised on page 165 of our August issue. These photographs comprise all the famous yachts from the year 1890 to the year 1905, including all the America's Cup defenders and challengers in that period, as well as steam yachts. Every one knows that Mr. Bolles was the foremost marine photographer of his time, and there are photographs here that can never be duplicated. These prints are 8 by 10 inches and we are selling them printed on heavy paper for $1.00 each. Make your selection and remit direct to us.

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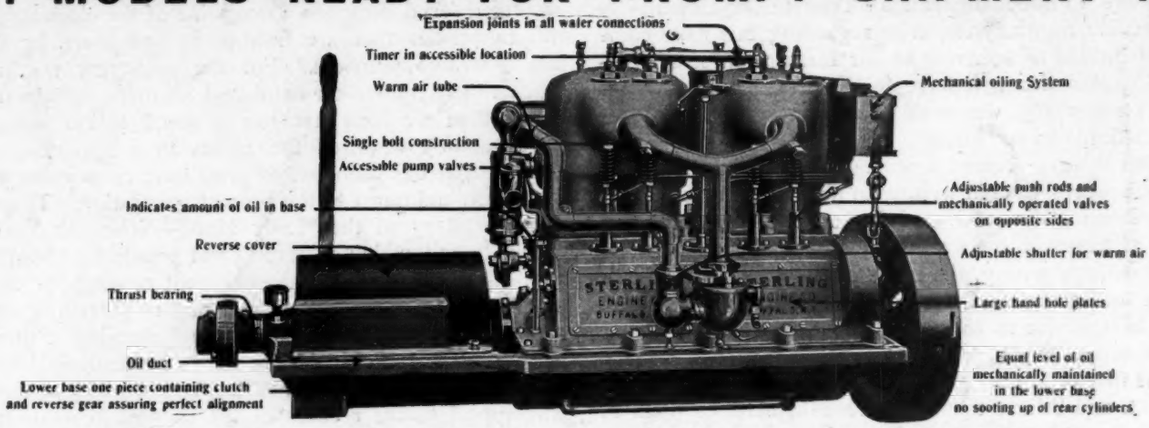
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